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ENVIRONMENTAL ASSESSMENT BOARD



ONTARIO HYDRO DEMAND/SUPPLY PLAN HEARINGS

VOLUME: 87

DATE: Tuesday, December 3, 1991

BEFORE:

HON. MR. JUSTICE E. SAUNDERS Chairman


DR. G. CONNELL Member

MS. G. PATTERSON Member

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ENVIRONMENTAL ASSESSMENT BOARD
ONTARIO HYDRO DEMAND/SUPPLY PLAN HEARING

IN THE MATTER OF the Environmental Assessment Act,
R.S.O. 1980, c. 140, as amended, and Regulations
thereunder;

AND IN THE MATTER OF an undertaking by Ontario Hydro
consisting of a program in respect of activities
associated with meeting future electricity
requirements in Ontario.

Held on the 5th Floor, 2200
Yonge Street, Toronto, Ontario,
on Tuesday, the 3rd day of December,
1991, commencing at 10:00 a.m.

VOLUME 87

B E F O R E :

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MS. G. PATTERSON	Member

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1 ---Upon commencing at 10:02 a.m.

2 THE REGISTRAR: Please come to order.

3 This hearing is now in session. Be seated, please.

4 MS. HARVIE: Mr. Chairman, I have given
5 eight copies of Interrogatory 6.26.265C, which is the
6 supplementary interrogatory promised to be delivered to
7 Mr. Castrilli this morning, and of course he also has
8 additional copies.

9 THE CHAIRMAN: And it is 367.55?

10 MS. HARVIE: Yes, that's correct.

11 THE CHAIRMAN: Now, Mr. Castrilli, your
12 working off your Volume 2 basically. I just wondered
13 if it would be possible to sort of go through the other
14 exhibits and transcripts you intend to refer to in
15 advance so that we can get them sort of organized. It
16 may save everybody, the panel and the witnesses, some
17 time if that's problem.

18 MR. CASTRILLI: I think I actually gave
19 the witnesses and the Board a list both of transcripts
20 and exhibits yesterday, I believe you probably would
21 have that.

22 THE CHAIRMAN: I am not sure I have it.
23 I don't know whether we got copies of it or not.

24 MS. KLEER: Here are two.

25 MR. CASTRILLI: That was distributed

1 yesterday morning.

2 THE CHAIRMAN: Just perhaps to make sure
3 we have them all. That might save a little time. Some
4 of them, I guess, you have already referred to.

5 MR. CASTRILLI: Yes, that's correct, Mr.
6 Chairman.

7 DR. CONNELL: Are there any that are not
8 needed?

9 THE CHAIRMAN: You also have been
10 referring, for example, to Exhibit 4.

11 MR. CASTRILLI: Yes, Mr. Chairman. You
12 will note the list that I gave you has an asterisk at
13 the bottom. I haven't repeated all the exhibits, for
14 example, that were identified by Ms. Harvie at the
15 beginning of her Panel 6.

16 THE CHAIRMAN: All right.

17 JUNE BASU ROY,
18 KENNETH SNELSON,
19 ERSKINE LEE FLOOK,
20 THOMAS EASTON WIGLE,
ALANNA MARY QUINN,
BRIAN JOHN McCORMICK,
REED CAMERON HARRIS; Resumed.

21 CROSS-EXAMINATION BY MR. CASTRILLI (Cont'd):

22 Q. Good morning, Panel.

23 Ms. Quinn, could I continue with you and
24 ask you to refer to page 127 of binder No. 2. This is
25 excerpts from a document entitled "Strategy to Cope

1 with Adverse Effects of Electricity Generation Projects
2 in Northern Manitoba," dated 1984, by Currie, Coopers &
3 Lybrand, the authors are Leslie A. Johnson and W.
4 Thomas Campbell.

5 Mr. Chairman, could I ask that this be
6 made the next exhibit?

7 THE CHAIRMAN: No.?

8 THE REGISTRAR: 408.

9 ---EXHIBIT NO. 408: Document entitled "Strategy to
10 Cope with Adverse Effects of Electricity
11 Generation Projects in Northern
12 Manitoba," dated 1984, by Currie, Coopers
& Lybrand, Leslie A. Johnson and W.
Thomas Campbell.

13 MR. CASTRILLI: Q. Ms. Quinn, were you
14 familiar with this document before you saw it in this
15 binder?

16 MS. QUINN: A. No, I wasn't.

17 Q. Could I ask you to refer to page 140
18 and we are looking at item No. 3 at the bottom of the
19 page, entitled "The Overall Social and Economic
20 Condition of the People." It states as follows:

21 The overall social and economic
22 condition of the people in the
23 communities affected by flooding is not
24 good. Many communities have been reduced
25 from a position of relative self-reliance

1 to one of dependence. This is
2 particularly true in the case of Illford,
3 South Indian Lake and Easterville where
4 prior to flooding the evidence indicates
5 that there were strong and prosperous
6 local communities based on natural
7 resources.

8 Just very quickly, Ms. Quinn, at page
9 141, the last sentence before item No. 4 notes that
10 these local Aboriginal communities affected by flooding
11 now have a economies in virtual ruin.

12 One other reference, at page 135 of the
13 same exhibit, we are looking at the one of the findings
14 of the consultants under the heading "Social Damages
15 Are Overwhelming", it notes that social disintegration
16 in the communities affected by the flooding is
17 widespread.

18 Now, in the DSP, in a number of places
19 and also in the environmental analysis, as I think we
20 went over yesterday, we saw a number of references to
21 the potential economic benefits, if you like, of
22 hydroelectric development. Would you agree with me
23 that the analysis that we find in this particular
24 exhibit, Exhibit 408, suggests that there can be very
25 serious economic detriment to communities as a result

1 of hydroelectric development?

2 A. I am aware this document speaks to
3 the negative impacts of flooding.

4 Q. Is it an analysis you have any
5 difficulty accepting?

6 A. The specific analysis associated with
7 flooding?

8 Q. Yes.

9 A. No. And in fact, as I read through
10 the document I found that the way they investigated the
11 study was to follow different approaches, but the most
12 important one they said was to conduct interviews with
13 people in the area who were affected, and I think I
14 concur completely whether that approach to determining
15 the significance of effects, and would like to say
16 that, once again, that is what Ontario Hydro's approach
17 predominantly has been.

18 Q. I'm sorry, that's what Ontario
19 Hydro's?

20 A. Approach has been. Unfortunately we
21 have not been able to pursue that work, but that's the
22 kind of approach that we think is important to
23 determine significance of effects, is to work directly
24 with the people affected and the communities.

25 Q. I believe we asked you yesterday if

1 you could confirm when consultation, for example, with
2 my clients began on the Mattagami extensions. I think
3 I suggested the date was November, 1989. In fact, I
4 believe it was January 1990; is that right?

5 A. No, before the new year, before 1990
6 we were in touch with a consulting firm based in
7 Timmins, an Aboriginal consulting firm, to see if they
8 could perform of the Aboriginal component of the
9 Mattagami environmental assessment, and during the
10 latter part of 1989 they began to have discussions with
11 some of the First Nations and determined that they
12 would not pursue the contract. But your point, I
13 believe, is when discussions started with Aboriginal
14 people affected by the Mattagami and they did start in
15 1989, in the latter part of the year.

16 Q. So November '89 was actually roughly
17 the rate date?

18 A. Yes.

19 Q. And the Mattagami extensions had in
20 fact been under planning consideration by Ontario Hydro
21 since at least 1982; is that right?

22 MR. FLOOK: A. I guess since the 1950s
23 people thought about it off and on, hot and cold, do it
24 for one of summer or think about it at sometime. So
25 some time a while back people had been doing some

1 thinking about it, even when the original stations were
2 built.

3 Q. Well, I was going to give you the
4 benefit of the doubt in 1982. If you want to say it's
5 1950, that is fine.

6 But in any event, we are talking about a
7 minimum of some seven years after serious planning by
8 Ontario Hydro began in relation to the Mattagami
9 extensions that Hydro decided to contact or initiate
10 contacts with Aboriginal people.

11 MR. MCCORMICK: A. I think I explained
12 in cross-examination the complications that arose
13 because of the negotiations with Spruce Falls over
14 water rights. When the EA process officially was
15 initiated that's when the presubmission consultation
16 began.

17 [10:14 a.m.]

18 There may have been work done, but as I
19 indicated, we could not initiate those kind of
20 activities, because sensitive negotiations were under
21 way. If those negotiations were unsuccessful, then the
22 project would not proceed.

23 Q. Just focusing again on Exhibit 408,
24 Ms. Quinn, there is nothing positive in the analysis,
25 we find in Exhibit 408 about the effect on Aboriginal

1 communities, the economic effect on Aboriginal
2 communities of hydraulic development.

3 I'm wondering how it is both the
4 environmental analysis and the Demand/Supply Plan
5 suggest there is something positive to expect arising
6 from hydraulic development vis-a-vis economic impact?

7 MS. HARVIE: Mr. Chairman, I draw your
8 attention -- these are excerpts from a report. Whether
9 or not other portions of the report dealt with impacts,
10 it's impossible to tell.

11 THE CHAIRMAN: At a quick glance, that's
12 only that, appears there is very little positive in the
13 report.

14 MS. QUINN: If I could also respond, on
15 page 129, the first sentence of the executive summary
16 says that:

17 Our responsibility in this assignment
18 has been to investigate the adverse
19 affects of flooding in northern Manitoba
20 and to recommend ways and means of
21 providing compensation to the affected
22 communities and individuals.

23 Mr. Castrilli, I submit that you would
24 not find any discussion of topics other than flooding,
25 nor any discussion of positive affects in this report.

1 It would have been beyond their terms of reference.

2 MR. CASTRILLI: Q. Because the situation
3 was already so bad they had nothing to do except
4 examine how they could compensate at the eleventh hour.

5 THE CHAIRMAN: I think it is a bit of a
6 leap to take this particular situation in Manitoba and
7 say that this therefore affects all Aboriginal
8 communities, which your questions suggests. Perhaps
9 you could ask questions along those lines to the
10 witness.

11 MR. CASTRILLI: I'm content to do that,
12 Mr. Chairman.

13 Q. Ms. Quinn, what did Ontario Hydro
14 rely upon for the conclusions we find in the DSP and
15 the environmental analysis, that there is something
16 positive that will result, or result to Aboriginal
17 communities in terms of economic development, as
18 opposed to the kinds of negative economic effects we
19 see outlined in, for example, Exhibit 408?

20 MS. QUINN: A. If you could just give me
21 a second, I'm going to pull out the Little Jackfish
22 social impact assessment. I have a table specifically
23 to refer you to. It is 8-1.

24 For the record, this is the document that
25 is called the "Little Jackfish River Hydroelectric

1 Project, Social Economic Assessment of the Generation
2 Facilities," report No. CSPH 88001, dated June 1988.
3 Table 8-1...

4 THE CHAIRMAN: Is that an exhibit?

5 MS. HARVIE: I don't believe it is, no,
6 sir.

7 MR. SNELSON: June '88?

8 MS. QUINN: Yes, that's correct.

9 MR. SNELSON: I believe it was attached
10 to Interrogatory 6.2.4.

11 THE CHAIRMAN: And Interrogatory 6.2.4
12 has already been given a number in this panel, has it?

13 MS. HARVIE: No, I don't believe it has.

14 THE CHAIRMAN: Perhaps it could be then.

15 THE REGISTRAR: 367.59.

16 ---EXHIBIT NO. 367.59: Interrogatory No. 6.2.4.

17 MS. QUINN: Shall I proceed?

18 THE CHAIRMAN: Well, I think the question
19 was what evidence did you rely on for your statement
20 there were positive affects, and one of them is this
21 report you just mentioned. I may be wrong, but I think
22 this area was canvassed yesterday quite thoroughly.

23 MR. CASTRILLI: I'm just wrapping up this
24 area, Mr. Chairman. This is remaining questions. I'm
25 almost ready to move to a new area, but I'm content to

1 have whatever reference it is that Ms. Quinn says
2 supports her position.

3 Q. So it is table?

4 MS. QUINN: A. 8-1, basically page 71.

5 The first part of the table deals with
6 construction, and the second part on the back page of
7 the same sheet deals with operations.

8 There is a second document, which I will
9 not refer you to, but it has to do with the definition
10 of public consultation activities. And the information
11 that's provided on this page has been through an
12 extensive public consultation program.

13 Now I think for those of you who don't
14 have this in front of you, the table sets out on the
15 left-hand side, about ten or twelve different topics,
16 and it reviews each of those topics for the communities
17 Armstrong, Gull Bay, the rail line communities and Lake
18 Nipigon communities.

19 Now Armstrong is the home base, although
20 not specifically a reserve of a first nation, and Gull
21 Bay, the rail line communities and Lake Nipigon
22 communities are also aboriginal communities.

23 On the right-hand side of the table there
24 is a series of columns that go from identifying
25 significant adverse to minor adverse to no affect to

1 minor beneficial to significant beneficial. And what
2 you will see is that there are dots entered against the
3 specific topics in accordance with the consideration
4 that they were given by the people from the local area.

5 So, for example, the Gull Bay community
6 considered employment a significant beneficial, and
7 there is a dot entered in that column. Job training
8 was considered minor beneficial.

9 I think if you look at the rail line
10 communities, which are 100 per cent Aboriginal, they
11 included both employment and job training as minor
12 beneficial.

13 I don't know if you want me to proceed,
14 Mr. Castrilli, but I think that's the kind of
15 information that we would rely on, and it comes from
16 the communities affected.

17 Q. I note that this table is described
18 as predicted affects. This is about a future project,
19 is that right?

20 A. Yes, it is, that's correct. This is
21 about the way in which the community valued the
22 particular affects. It is the step in social impact
23 assessment that has to do with assessment and
24 evaluation.

25 Q. This is not retrospective, is that

1 correct?

2 A. That's correct.

3 Q. This document has actually been
4 prepared in expectation of a forthcoming hearing in the
5 future, is that right?

6 A. Yes, it's an environmental assessment
7 submission.

8 Q. So it has not yet been tested in any
9 form, is that correct?

10 A. I'm not sure what you mean by that,
11 any form.

12 Q. Well, if this was prepared in
13 preparation for the submission in relation to a future
14 matter. It has not yet been examined in a public
15 forum, is that correct?

16 A. I would have thought that meetings
17 and the establishment of a liaison community with the
18 people in the area was a public forum.

19 Q. It hasn't been dealt with in a
20 hearing to your knowledge, is that correct?

21 A. That is correct.

22 Q. There is no literature attached or
23 associated with this, is that right, in relation --
24 there was -- maybe you can just explain what if
25 anything besides what you've described supports the

1 contents of this two page table.

2 A. I'm not purporting to suggest it is
3 anything more than the evaluation of people from the
4 area about what they see as positive and negative
5 affects. I didn't understand your question to be
6 specific to literature review.

7 Q. It was. If you have anything to add
8 in relation to literature...

9 A. Yes. I refer you to the Big Chute
10 Environmental Assessment, specifically the social
11 impact assessment, and I will, without taking the time
12 of the panel, suggest that you look at publication by
13 Murdock et al., dated 1986, and it is Murdock, S.H.
14 F.L. Leistritz, L-e-i-s-t-r-i-t-z, and R.R. Hamm,
15 H-a-m-m, 1986.

16 You can see this reference on page 128 of
17 the Big Chute draft social impact assessment, which was
18 distributed with an interrogatory, and I believe you
19 will find this in a listing that is approximately four
20 pages long of literature that has been reviewed to
21 support this particular social impact assessment.

22 Q. All of the documents you refer to in
23 that four-page list are in relation to retrospective
24 analysis of hydroelectric impacts on Aboriginal
25 communities?

1 A. No, I didn't suggest that. But the
2 environmental assessment that I just referred to has
3 been accepted by the Ministry of the Environment. It
4 is hydroelectric, and it is now under construction.
5 [10:25 a.m.]

6 Q. All right. Now, this is a matter
7 that we are actually going to deal with in our
8 evidence. But I wanted to know whether you are
9 familiar with a 1990 Manitoba Hydro report which
10 outlined that out of a total of \$660 million worth of
11 purchases made to the end of March 1990 in respect of
12 the limestone hydroelectric project, that northern
13 Aboriginal businesses received 6/10ths of 1 per cent of
14 the purchases, or 6/10ths of 1 per cent of the
15 purchases went to northern Aboriginal businesses?

16 A. No, I am not aware of the report.

17 Q. If those figures that I have just
18 referred to are correct, Ms. Quinn, would you agree
19 with me that if that's the type of benefits, economic
20 benefits one could expect from hydroelectric activity
21 in northern communities, that such benefits would be
22 comparatively minimal?

23 A. I would probably think that. The
24 numbers sound low. I have no idea whether or not the
25 businesses that received contracts were new businesses

1 set up specifically for this purpose. I have no way to
2 evaluate the significance to the local people, but I do
3 think the numbers sound low.

4 Q. Thank you. To be perfectly clear,
5 Ms. Quinn, we do not have an examination of social
6 economic impacts on Aboriginal people of the range of
7 attainable potential that Ontario Hydro was seeking
8 approval for before this Board; is that correct?

9 A. No, that's correct. They are part of
10 the community of Ontario and reference is made to
11 Aboriginal people under I believe two, at least two of
12 the criteria used to evaluate the Demand/Supply Plan
13 contained in the environmental analysis.

14 Q. Can I ask you to refer, Mr. Harris,
15 to Exhibit 333. This is one of the documents that
16 Ontario Hydro had indicated it was relying upon for
17 this particular panel. We are looking at pages 21 and
18 22.

19 This is under the general heading of
20 Mercury Mitigation Options and I am interested in this
21 section as it relates to humans, not to fish.

22 In looking at the mitigation options that
23 are outlined at the bottom of page 21 and also on to
24 the top of page 22, is it possible, Mr. Harris, or one
25 possible result of the measures that are listed on

1 those two pages would be that Aboriginal people would
2 be forced to cease eating fish in their traditional
3 areas or, indeed, simply cease eating the fish that
4 they would catch?

5 MR. HARRIS: A. I think that would have
6 to be look at on a case-by-case basis, but it is
7 possible that if fish restrictions were issued, that
8 yes, fish in certain water bodies or certain species
9 would no longer be consumed.

10 Whether that encompasses their complete
11 traditional area I think is a question that would
12 require some study. But there may be restrictions in
13 particular locations and particular types of fish.

14 Q. Has Ontario Hydro evaluated and
15 reported upon, in material that's before this Board,
16 the social consequences to native societies of not
17 being able to fish and have not been able to take the
18 traditional meal of fish as a result of mercury
19 contamination from hydroelectric development?

20 MS. QUINN: A. That's the kind of topic
21 that we would hope to have studied in the plan
22 assessment. As you know last February 6 there was a
23 meeting in Timmins where more than 100 people attended
24 including representatives of the Aboriginal communities
25 in the Moose River Basin, and the intention of the

1 meeting was to discuss co-planning of studies and to
2 identify topics of interest that people from the basin,
3 Aboriginal and non-Aboriginal may well be interested
4 in. Unfortunately, near the outset of the meeting a
5 motion was read on behalf of the Coalition to say that
6 they disagreed with our approach, which I who was there
7 felt we had not yet defined; in fact, that was the task
8 of the whole room.

9 Had the topic been put forward for study
10 and had the group agreed to proceed with work, I think
11 we would be into that study by now.

12 Q. You haven't otherwise analyzed the
13 situation from the available literature; is that
14 correct?

15 A. Mr. Castrilli, one of the things that
16 we hoped to do during the plan assessment was to hire
17 people who could go exactly that kind of work,
18 including Aboriginal people. We would want to know
19 that the literature was useful and pertinent.

20 I think in my direct evidence I spoke to
21 the fact that data is lacking and sometimes it is even
22 the problem of credibility of data. We would have
23 wanted to have felt some confidence that any studies
24 looked at would have been credible to the people
25 involved in the study. So we did not study it and we

1 felt that was in fact something of an honourable thing
2 to do, was to wait until the people affected by the
3 study would be part of the study.

4 Q. Is your testimony, Ms. Quinn, that
5 this is not a matter that can be dealt with at the plan
6 level?

7 A. We are saying that it was to be dealt
8 with at the plan assessment level.

9 Q. Why is that not something that could
10 be dealt with here? I am not quite understanding what
11 the invitation is.

12 A. We dealt with exclusion criteria to
13 arrive at attainable potential. We don't know the
14 information about the basin. One would have to do
15 fairly specific studies to understand what the intake
16 is, and we are looking at this kind of topic in an
17 agreement we have reached with the White Sands Band,
18 and this has been done at the project be environmental
19 assessment level.

20 So, it doesn't fit into exclusion
21 criteria, it doesn't fit into this particular stage in
22 considering the hydroelectric option.

23 Q. Now, Ms. Quinn, this morning, at the
24 outset, Ms. Harvie filed Exhibit 367.55. Actually, I
25 think we should look at this in conjunction with the

1 other portion of 367.55 which is found at page 117 of
2 the Volume 2 binder.

3 Do you have both pages?

4 A. Yes, I do.

5 Q. Now, in your original answer found at
6 page 117, you note in item C that the literature
7 available for review to further guide the social
8 environment criteria for the DSP was not necessarily
9 about hydraulic generation but about social impacts in
10 general.

11 I take it that what we now have in the
12 addendum to 367.55 that was filed this morning, is a
13 list of both hydroelectrically related studies and
14 projects that are not hydraulic related. And perhaps
15 just for clarification, some of the reports are
16 obviously in relation to hydraulic and some are not
17 necessarily.

18 I am wondering if I could have an
19 undertaking to provide I think it's item No. 7 under A,
20 the Onakawana study. I don't think that's one we
21 previously had.

22 A. Yes, you can.

23 Q. Thank you.

24 THE CHAIRMAN: That will be No.?

25 THE REGISTRAR: 366.6.

1 ---UNDERTAKING NO. 366.6: Ontario Hydro undertakes to
2 provide the Onakawana study.

3 MR. CASTRILLI: Q. Ms. Quinn, just on
4 the issue that we broached a moment ago relating to an
5 evaluation of social consequences of mercury and the
6 inability or the potential inability to eat fish as a
7 result. If a review of experience elsewhere, I will
8 just use three examples, Quebec, Manitoba, and northern
9 Ontario, suggested that mercury and the potential
10 social disintegration associated with reduced fishing
11 or eliminated fishing opportunities and consumption
12 were among the major unmitigatable impacts of hydraulic
13 development, would Ontario Hydro evaluate that as a
14 possible exclusionary criterion?

15 MS. QUINN: A. You have our exclusionary
16 criterion.

17 Q. So what is the answer to my question?

18 A. We have another criteria that I
19 believe you heard reference to and that is to do with
20 the fact that we will not proceed with planning in the
21 Moose River Basin until a co-planning agreement is
22 arrived at.

23 If there is a major interest on the part
24 of the Aboriginal people in the area to include in that
25 discussion something to do with mercury and the effects

1 on their diet, I would find it inappropriate for me to
2 conclude exactly what the outcome might be, but it
3 might have a prominent role in any further study.

4 But I don't understand mechanically how I
5 can respond to your suggestion that an exclusion
6 criteria be added. We have already submitted our
7 evidence on that point.

8 Q. You are not limited to the four
9 corners of your evidence, Ms. Quinn.

10 I am asking you as a hypothetical, if a
11 review of experience elsewhere, I have named three
12 areas, we can add more if you like, suggested that
13 mercury and the cultural disintegration associated --

14 THE CHAIRMAN: I think you included
15 Ontario in that.

16 MR. CASTRILLI: I said Quebec, Manitoba
17 and northern Ontario.

18 THE CHAIRMAN: Yes.

19 MR. CASTRILLI: Q. Suggested that
20 mercury and the associated cultural disintegration as a
21 result of reduced fishing were among the major
22 unmitigatable impacts of hydraulic development,
23 wouldn't Hydro want to add that, or at least evaluate
24 that as a possible exclusionary criterion? I don't
25 think you need to refer to other sources. Can you

1 answer that question?

2 [10:40 a.m.]

3 MS. QUINN: A. Actually, I find it quite
4 confusing, and it's from a timing point of view. We
5 wouldn't know the extent of the mercury problem, we
6 wouldn't know the extent of flooding, we wouldn't know
7 the extent of the uptake, not only by the mercury but
8 into the human population, until further along in the
9 studies, and I think that's the case with the other
10 provinces that you've referred to as well. So I don't
11 think it can be relied on as an exclusion criteria.

12 Q. I'm still not quite sure I understand
13 your answer, Ms. Quinn. Whether or not there is any
14 information that Ontario Hydro has collected with
15 respect to Ontario, from my understanding, there is
16 literature in both Manitoba and Quebec which already
17 speaks to this issue. What has Ontario Hydro concluded
18 about what that literature suggests?

19 A. That it is an important and a
20 sensitive topic, and it has been referred to in the
21 environmental analysis; that it would become something
22 that we would want covered in the plan assessment work,
23 and would be, I believe, the subject of a particular
24 study that would be involving a variety of people, as
25 well as the Aboriginal community; that we're sorry that

1 work did not proceed already at this time, but we
2 believe that it is not an exclusionary criteria that it
3 is a stand alone at this point in time.

4 We have no information that is specific
5 to Ontario that will help us make an assessment of the
6 particulars associated with mercury update and dietary
7 impacts, and literature relates to other provinces.
8 It's based on projects that have quite different
9 circumstances, and we would not find it reliable to
10 rely solely on the literature that speaks to other
11 provinces and other projects. It's not research that
12 has as much integrity as we would like. We find it
13 helpful as an indicator, and we have mentioned it in
14 the environmental assessment for that reason.

15 Q. Ms. Quinn, wasn't it on the basis of
16 experience elsewhere with respect to the issue of
17 flooding, that Ontario Hydro concluded that flooding
18 should become an exclusionary criterion?

19 A. Flooding is a major reason for the
20 exclusion criteria to do with the northern rivers.
21 That's specific to Ontario.

22 Q. Well, you haven't flooded the
23 northern rivers yet. Didn't you take account of the
24 experience in other jurisdictions and the results of
25 that experience in other jurisdictions, to conclude

1 that flooding should be an exclusionary criterion?

2 A. We don't operate in isolation, but I
3 think the evidence that was provided by my panel
4 members spoke specifically to northern rivers, the
5 terrain associated with them, the lack of natural falls
6 and the gradient. And I believe that we made our
7 decision on flooding specific to do with those rivers
8 because of the conditions that exist in that particular
9 geographical area.

10 Q. So you took no account in
11 establishing that exclusionary criterion with respect
12 to flooding of the experience in other jurisdictions
13 with respect to flooding, is that your testimony?

14 A. Mr. Castrilli, the first part of what
15 I just said in my last answers was that we did not work
16 in isolation, but we did not rely on that other
17 material.

18 It's not as important as matters
19 pertaining to Ontario, because we are under the Ontario
20 Environmental Assessment Act, we are affecting people
21 in Ontario, and furthermore, we would like to have
22 specific studies that would tell us the degree of
23 significance.

24 At this point in time we're talking about
25 attainable potential. We don't know how much of it is

1 even going to be developed in the north.

2 MR. McCORMICK: A. We should also
3 reinforce the fact that we indicated that flooding was
4 one of three criteria that influenced the exclusion of
5 the northern rivers, it was not the sole criterion.

6 Q. Can I refer you to, Ms. Quinn, to
7 page 123 of the binder?

8 MR. CASTRILLI: Mr. Chairman, this is
9 Interrogatory 6.26.92.

10 THE CHAIRMAN: Which will be number?

11 THE REGISTRAR: That will be 367.60.

12 ---EXHIBIT NO. 367.60: Interrogatory No. 6.26.92.

13 MR. CASTRILLI: Q. Ms. Quinn, in this
14 answer, Ontario Hydro recognizes that Aboriginal
15 communities may be dependent upon large expanses of
16 traditional lands for their material, social, cultural
17 and spiritual pursuits. Actually we should also refer
18 to the next page as well, page 124. That's
19 Interrogatory 6.26.94.

20 THE REGISTRAR: That will be 367.61.

21 ---EXHIBIT NO. 367.61: Interrogatory No. 6.26.94.

22 MR. CASTRILLI: Q. In Exhibit 367.61,
23 Ontario Hydro indicates that it agrees that individual
24 human beings are part of the environment to be affected
25 by northern hydraulic development.

1 Now I take it that you don't disagree
2 with the proposition that changes to the physical
3 environment can induce social and cultural change, is
4 that correct?

5 MS. QUINN: A. I agree.

6 Q. I take it from the combination of the
7 two answers we see in Exhibit 367.60 and 367.61 that
8 you would agree that changes to the physical, social
9 and cultural environments can also induce changes to
10 individual human beings, including potentially
11 psychological change. Is that a proposition generally
12 you can accept?

13 A. Yes, it's certainly a hypothesis
14 within the social impact assessment field.

15 Q. We have no analysis in the DSP or the
16 environmental analysis with respect to the range of
17 potential, psychological impacts one might see as a
18 result of northern hydraulic development, is that
19 correct?

20 A. If you can give me just a second, Mr.
21 Castrilli, I might be able to help you.

22 I would point you to page 3-5 within the
23 environmental analysis, which is Exhibit 4.

24 Q. I have it. Where are you directing
25 me?

1 MS. PATTERSON: What page is that again?

2 THE CHAIRMAN: 3-5.

3 MS. QUINN: The left-hand column. And I
4 would just draw your attention to two particular
5 criteria, special and sensitive groups and lifestyle
6 impacts. That would be broad enough to embrace the
7 kinds of effects you're referring to. In fact, even
8 the third one, or excuse me, the last one at the bottom
9 of that page, "The Distribution of Risks and Benefits"
10 could take that into account.

11 MR. CASTRILLI: Q. But you actually have
12 not performed the evaluation, is that correct? We
13 certainly don't see it in this document.

14 MS. QUINN: A. No, the document before
15 you is the evaluation associated with the Demand/Supply
16 Plan, that's right.

17 Q. In the environmental analysis, could
18 I just refer you to table C-6? That would be pages
19 C-15 and C-16. Would you agree with me, Ms. Quinn,
20 that -- this is the section where you have a summary
21 table on hydraulic, hydraulic component, both in terms
22 of potential effects and potential mitigation.

23 Would you agree with me that this table
24 does not include cultural breakdown or destruction or
25 individual psychological impacts arising from hydraulic

1 development?

2 A. Mr. Castrilli, the individual effects
3 that you're referring to could not have been addressed
4 specifically within this document. That certainly
5 would have been something done at another stage in the
6 studies, project specific, I believe. And to that
7 extent, we did make reference to initiatives for local
8 participation in projects under the heading
9 "Lifestyle."

10 I would like to draw your attention again
11 to the efforts made in the past, and also the specific
12 exclusion criteria associated with our proposal at this
13 time that has to do with co-planning of studies and
14 reaching some agreement.

15 I believe that if that is an important
16 topic to the Aboriginal community, the First Nations in
17 the Moose River Basin, that that will become a topic of
18 study at a later stage, and we will, in fact, be able
19 to proceed in study in a way that speaks to the
20 individuals, that has some meaning to them.

21 Q. Ms. Quinn, if cultural breakdown and
22 destruction and individual psychological impacts are
23 possible from hydraulic development, what possible
24 reason would you have for not including them on pages
25 C-15 and C-16?

1 A. Well, Mr. Castrilli, I think the
2 heading itself "Lifestyle" in the middle column says,
3 "changes in northern lifestyles particularly for native
4 people" covers your point. In fact in an interrogatory
5 that you have received, we mentioned, it's 6.26.148,
6 and I don't believe it's an exhibit, but if I could --
7 that we could have named that whole section lifestyle
8 and cultural impacts.

9 We feel there is no particular
10 distinction that we have drawn between lifestyle and
11 culture, and we acknowledge that changes can occur as a
12 result of hydroelectric development, and we refer
13 specifically to native people.

14 I think if you go back in the text,
15 you'll see that it also refers to northern communities.

16 Q. Well, Ms. Quinn, I'm asking you
17 whether table C-6 is complete. If it doesn't
18 explicitly refer to something that has been seen in the
19 literature as a result...

20 THE CHAIRMAN: I think she's answered
21 that question, Mr. Castrilli. She said it's
22 encompassed under "Lifestyle," and I think that is the
23 answer you've got to accept. You may not agree with
24 it, you can argue when the time comes that that is
25 inadequate, but I think that's your answer.

1 MR. CASTRILLI: Mr. Chairman, since the
2 witness has referred to 6.26.148, that's actually to be
3 found at page 121 of the binder, and we might as well
4 make that an exhibit.

5 THE CHAIRMAN: That will be an
6 interrogatory number then, please?

7 THE REGISTRAR: 367.62, Mr. Chairman.

8 ---EXHIBIT NO. 367.62: Interrogatory No. 6.2.148.

9 MR. CASTRILLI: And actually the answer
10 in that exhibit refers to another interrogatory, which
11 is 6.26.130, which is found at page 122 of the binder.

12 THE CHAIRMAN: So perhaps that could be
13 No. 63.

14 ---EXHIBIT NO. 367.63: Interrogatory No. 6.26.130.

15 MS. QUINN: Mr. Castrilli, I believe that
16 there was a further response to 6.26.148 that your copy
17 does not refer to.

18 MR. CASTRILLI: Q. I'm sorry, I'm not
19 sure what you're referring to.

20 MS. QUINN: A. There is an answer
21 associated with Interrogatory 6.26.148, which is now
22 Exhibit 367.62 that is a little longer than the answer
23 that you have in the version you've put in your binder.

24 Q. Well, Ms. Quinn, I'm only familiar
25 with one version to the answer. If there is another

1 version, I'd like to have it or know what it is.

2 [10:55 a.m.]

3 A. Well, we can undertake to get that to
4 you.

5 Q. Before the end of my cross-
6 examination?

7 A. How about just after the break.

8 Q. All right. Now, let's move ahead to
9 what appears to be one of the more popular pages in my
10 cross-examination, page 4-6 of the environmental
11 analysis. I'm sorry, we are looking at the left-hand
12 column, at line 16, the sentence that begins "Northern
13 hydraulic developments," do you have that.

14 It says:

15 Northern hydraulic developments may
16 have additional regional development
17 effects such as electrification of remote
18 communities and improved road access
19 which are prerequisites for economic
20 development.

21 Just stopping there and just focusing on
22 the issue of electrification of remote communities. My
23 understanding, Ms. Quinn, is that the DSP is only
24 directed to expanding the bulk electricity system, is
25 that your understanding as well?

1 MR. SNELSON: A. Yes, that is correct.

2 Q. And that remote electrification of
3 Aboriginal communities would only occur through
4 expansion of the remote community energy supply which
5 is the RCES?

6 MR. McCORMICK: A. That isn't
7 necessarily the case. There may be examples such as at
8 Little Jackfish where the presence of the hydroelectric
9 station, its proximity to other communities may enable
10 them to be connected to the grid.

11 Q. The other part of that paragraph read
12 into the record deals with improved road access as a
13 prerequisite for economic development. In this regard
14 can I refer to you page 125 of the binder. It's
15 Interrogatory 6.26.18.

16 THE CHAIRMAN: 182, I think.

17 MR. CASTRILLI: I'm sorry, 6.26.182.

18 THE REGISTRAR: That will be 367.64.

19 ---EXHIBIT NO. 367.64: Interrogatory No. 6.26.182.

20 MR. CASTRILLI: Q. In this answer it's
21 indicated that Ontario Hydro has not studied the impact
22 on native people of the construction, operation or
23 maintenance of present and future access roads within
24 the Moose River Basin, and that such details will be
25 determined as part of site-specific environmental

1 assessment work yet to be carried out.

2 In general, Ms. Quinn, you would agree
3 that road access can have unwelcome impacts on remote
4 Aboriginal communities?

5 MS. QUINN: A. In my direct evidence I
6 spoke exactly to the example of access roads and the
7 fact that it depends on the members of the community
8 affected by the access road as to whether they consider
9 it negatively or positively, and we have acknowledged
10 that within a particular community there can be also a
11 range of views on that.

12 Q. So that, for example, access roads
13 could bring greater competition for wildlife? Is that
14 one potential negative impact?

15 A. Yes, I said that specifically in my
16 direct evidence, that there could be competition among
17 resource users with the casual users and this is
18 permitted by the increase in access roads or
19 improvement of them.

20 Q. A further negative impact could be
21 increased pressures arising from, for example, logging
22 and mining activity as a result of the existence of the
23 access road?

24 A. I don't know whether or not a mining
25 company or a logging company would find the existence

1 of some of the access roads significant in their
2 decision-making. I honestly don't know. I can't speak
3 on their behalf.

4 Q. Hydro didn't examine that issue in
5 its environmental analysis?

6 MR. McCORMICK: A. Through the
7 site-specific environmental assessment process, the
8 examination of the effects of access roads, the need
9 for access roads, whether they should properly be gated
10 and only used on a temporary basis or not used at all,
11 this is something that would be dealt with at that
12 level, at that stage in the planning process.

13 One can't assume at this point that the
14 access roads be present that would allow increased
15 hunting, fishing, forestry or whatever. These
16 decisions would be made at that time.

17 Q. Well, there may be views different
18 than yours, Mr. McCormick, that will be heard later in
19 this hearing. What I want to know is whether Hydro
20 considered it in the environmental analysis.

21 THE CHAIRMAN: I think you have an answer
22 for that. They said they did and I think that's their
23 answer. Whether they did it sufficiently or not may be
24 an issue that you want to dispute it later, but they
25 did it.

1 MR. CASTRILLI: I am sorry, I thought I
2 heard Mr. McCormick say he did not.

3 THE CHAIRMAN: They considered in generic
4 terms - I shouldn't use that word perhaps - the factor
5 of access roads and they put it into their Exhibit 4.
6 They recognized in their evidence that there are
7 positive and negative effects to access roads which can
8 only be assessed on a site-specific basis. That's
9 their evidence.

10 MR. CASTRILLI: Q. Has Ontario Hydro
11 studied the significance of waterways to the land use
12 patterns of Aboriginal people in the Moose River Basin,
13 Ms. Quinn?

14 MS. QUINN: A. I'm sorry to say it's the
15 same answer. We wouldn't have that information unless
16 we were working with the Aboriginal community to find
17 out from them what their usage of the waterways would
18 be, and again I give as an example the study that we
19 are doing in conjunction with the White Sands Band that
20 is specific to the patterns that they have, and that is
21 at the project-specific level.

22 Q. Is Ontario Hydro aware of any changes
23 in the navigability of the Mattagami or Abitibi
24 Rivers since the construction of existing hydraulic
25 facilities?

1 MR. McCORMICK: A. I think we are aware
2 that concerns have been expressed. Beyond that I can't
3 respond to that.

4 Q. Well, is the answer yes or no that
5 you have studied it?

6 You have told me you know that concerns
7 have been expressed. I have asked you whether Hydro
8 has studied the problem.

9 A. We have studied in conjunction with
10 the Mattagami extensions environmental assessment water
11 level fluctuations to a certain point. I think the
12 plan assessment for the Moose River Basin was going to
13 look at that in considerably more detail, but again
14 those studies were terminated as a result of the
15 suspension of studies.

16 Q. Has Hydro studied the effect of
17 existing hydraulic development on harvesting territory
18 in the Moose River Basin, hunting, fishing, trapping?

19 MS. QUINN: A. No, we haven't. For the
20 Mattagami environmental assessment we make reference to
21 it, but our offer to do studies jointly with the
22 Aboriginal people in the area were turned down and so
23 we don't have that specific information.

24 Q. Could I refer you to page 147 of the
25 binder. This is Interrogatory 6.26.279.

1 THE REGISTRAR: 367.65.

2 ---EXHIBIT NO. 367.65: Interrogatory No. 6.26.279.

3 MR. CASTRILLI: Q. In this answer you
4 indicate that Hydro does not know the extent to which
5 future hydraulic development could cause adverse
6 effects on the natural infrastructure within the Moose
7 River Basin. Is that an accurate paraphrase of that
8 answer?

9 MS. QUINN: A. Yes. Also that it would
10 have been studied under the plan assessment and it
11 would certainly be addressed through our corporate
12 policy on compensation and mitigation.

13 THE CHAIRMAN: What do you mean by the
14 plan assessment, Ms. Quinn?

15 MS. QUINN: Sorry. The plan assessment
16 that was proposed by Ontario Hydro for the Moose River
17 Basin, it was to address topics that were of interest
18 across the basin involving all of the different
19 interests in the basin. Last February in Timmins there
20 were more than 100 people invited to a meeting convened
21 by Hydro to discuss how studies might proceed, what
22 topics might be of interest, who might be wanting to
23 pursue particular studies, how they would be funded,
24 and it included government, federal, provincial, First
25 Nations, other Aboriginal groups and representatives of

1 communities from within the Basin. We refer to that as
2 our plan assessment, Moose River Basin plan assessment.
3 And work on that has not proceeded. In fact, field
4 studies that were planned for the summer were stopped.

5 MS. HARVIE: Mr. Chairman, this piece of
6 work was referred to by Mr. Campbell in his submissions
7 as early as the Moose River development Board motion.
8 It was document that was to be filed as a support
9 document along with the Abitibi Complex environmental
10 assessment, and would be updated as work proceeded
11 through the Moose River Basin.

12 MR. CASTRILLI: Can we move to page 126
13 of the binder. We are looking at Interrogatory
14 6.26.134.

15 THE REGISTRAR: 367.66.

16 ---EXHIBIT NO. 367.66: Interrogatory No. 6.26.134.

17 MR. CASTRILLI: Q. In this answer, Ms.
18 Quinn, you indicate that Ontario Hydro's current
19 intention is it that an Aboriginal resource use study
20 be carried out as a part of the Moose River Basin plan
21 assessment which you have just been referring to, and
22 that Ontario Hydro wishes to carry out this study
23 cooperatively with Aboriginal people including
24 development of terms of reference.

25 I am wondering, would it have been

1 appropriate in a generic hearing such as the one we
2 currently find ourselves in to establish a framework
3 that sets out the parameters with respect to land use
4 to be studied and the general approaches for studying
5 them? Would that have been appropriate for this
6 proceeding in your view?

7 MS. QUINN: A. Mr. Castrilli, this
8 interrogatory refers specifically --

9 THE CHAIRMAN: I think, Ms. Quinn, you
10 can make comments you like, but perhaps you should
11 answer the question of whether or not you would have
12 considered it to have been appropriate to make such a
13 study in connection with a generic hearing, and then
14 you can make your comments after that.

15 MS. QUINN: All right, thank you.

16 I don't believe it would have been
17 appropriate to have done such a study, or to have set
18 out terms of reference for such a study at this time.

19 I believe that the land use study that is
20 referred to, the land utilization study involves a fair
21 degree of specificity and participation from people in
22 an area, particularly when it's an Aboriginal community
23 that is having their land uses studied, and that would
24 therefore be something done at a plan assessment or
25 project-specific stage.

1 MR. CASTRILLI: Q. Is it also your view
2 that it would have not been appropriate in this
3 proceeding, the one we are in this morning, to have
4 identified, described and evaluated impacts that are
5 generally applicable from hydraulic generation? Just
6 to use three that I think are actually now exhibits,
7 social impacts on Aboriginal communities, land use and
8 road access, just to name three?

9 MS. QUINN: A. I'm sorry, Mr. Castrilli,
10 I am quite confused by your comment. I thought those
11 topics were referred to in our environmental analysis.

12 Q. Your testimony is that you did not
13 evaluate those, I am asking you, would it have not been
14 appropriate in a hearing of the type we are in at the
15 moment to identify, describe and evaluate the impacts
16 that are generally associated or applicable from
17 hydraulic generation, and I just named those three as
18 examples?

19 A. You're right in the sense that those
20 are topics that are pertinent. They have been
21 identified as we have said, and in a general way they
22 have been evaluated within of the environmental
23 analysis.

24 Q. Ms. Quinn, as a practitioner of
25 environmental assessment, would you agree with me as a

1 general proposition that in order for a proper
2 description and evaluation of mitigation and
3 remediation measures to occur, it must be proceeded by
4 both a proper description of the environment and
5 description of the effects on the environment of a
6 proposed undertaking?

7 A. Yes, at the project-specific stage, I
8 agree.

9 Q. What about at this stage we are in?

10 A. I find it difficult to pursue what
11 you are suggesting because we are seeking approval for
12 attainable potential. We have acknowledged that there
13 could be negative impacts, negative effects. We also
14 acknowledged that the significance of those may vary
15 depending on the views and values of the communities.
16 We also acknowledged in my direct evidence that
17 appropriate mitigation and compensation, impact
18 management measures are developed in conjunction with
19 the parties affected.

20 Q. In the hearing that we are in, which
21 is the one that is not site-specific or project-
22 specific but is generic in nature, I want to be clear
23 on your answer because I wasn't quite sure. Are you
24 telling this Board that it is not possible to -- sorry,
25 that it is possible, even in the absence of having

1 described the environment and described the effects on
2 the environment, to evaluate mitigation and remediation
3 measures?

4 A. No, I am saying that we spoke
5 generically about impact management and mitigation
6 measures which I specifically mean ways to reduce
7 adverse impacts.

8 [11:17 a.m.]

9 Those are referred to in generic ways to
10 do with the hydroelectric option within the
11 environmental analysis, and my direct evidence also
12 spoke about our corporate policies and seven or eight
13 specific ways in which impact management is approached.

14 I do believe that without the people
15 involved, affected by the various changes, that you
16 can't actually evaluate what particular impact
17 management approach is the best, you can't describe it
18 to any great extent, and you can't reach any
19 conclusions. I think you're missing a vital component,
20 and that is the views and values of the effected
21 parties, and the information about the specific changes
22 that could be possible.

23 Q. I'm sorry, could I refer you to
24 Exhibit 374? And we're looking at pages 53 and 54.

25 THE CHAIRMAN: Ms. Kleer went over this

1 page before, so I hope we don't get into repetition
2 here.

3 MR. CASTRILLI: No, I shouldn't be doing
4 that, Mr. Chairman.

5 Q. Ms. Quinn, this is the section
6 dealing with the hydraulic generation development
7 program, which sets out at the top of page 53 that:

8 "The program is being planned using
9 the following set of guidelines to
10 achieve optimum benefits."

11 And the two that I'm interested in are
12 actually on page 54. Firstly, on the top of page 54:

13 "Environmental and social community
14 concerns will be considered and
15 mitigation measures adopted as
16 appropriate."

17 And secondly:

18 "Rehabilitation of previous
19 environmental damage will also be
20 considered."

21 Was any of this work done?

22 THE CHAIRMAN: I think this has been
23 asked many, many times in many, many different ways,
24 and I think the answer has been given to it. You may
25 not think it was sufficient, but I think they told you

1 what they've done.

2 MR. CASTRILLI: Mr. Chairman, I'm advised
3 by Ms. Kleer that she didn't ask any questions...

4 THE CHAIRMAN: You've been asking them
5 all morning long, and they've given you their answer on
6 it. You may think it was insufficient, but they defer
7 some of these matters to site specific hearings.
8 That's the way they do it. They don't do the full
9 studies on some of the matters that you're talking
10 about until they get to a site specific. It isn't
11 useful, in their view, to do it that way.

12 Now also they say, and they may be right,
13 they may wrong, that they haven't been able to get the
14 cooperation of the local inhabitants to assist them in
15 this.

16 MR. CASTRILLI: Mr. Chairman, I'm only
17 now embarking on a discussion of mitigation.

18 THE CHAIRMAN: The mitigation they
19 consider to be site specific and not part of their
20 plan. That's what they've told you. As I say, you may
21 not agree with it, but I think you have to accept
22 their evidence for what it is.

23 MR. CASTRILLI: Mr. Chairman, a lot of my
24 remaining cross-examination is on the issue of
25 mitigation.

1 THE CHAIRMAN: Mitigation in my view, Mr.
2 Castrilli, is site specific. How can you work on
3 mitigation until you get to the site? I don't see how
4 you can.

5 MR. CASTRILLI: Well, Mr. Chairman, the
6 difficulty I'm having with your comment is that I have
7 to look at the entirety of section 5-3 of the
8 Environmental Assessment Act, and it is explicit about
9 dealing with the issue of mitigation.

10 THE CHAIRMAN: Section 5-3 has to be
11 looked at in the context of this hearing, and we said
12 that in our general, section 5-3 has to be looked at in
13 the context of this hearing. And it is fact that there
14 is a general planning for hydraulic of a generic
15 nature, and followed by a site specific planning. And
16 all that has to be taken into consideration when
17 considering 5-3. So 5-3 may not be subject to a
18 literal interpretation.

19 MR. CASTRILLI: Mr. Chairman, I'm
20 wondering if we could have the morning break at this
21 point.

22 THE CHAIRMAN: Certainly, we can take a
23 15 minute break.

24 THE REGISTRAR: Please come to order.
25 This hearing will recess for 15 minutes.

1 ---Recess at 11:24 a.m.

2 ---On resuming at 11:44 a.m.

3 THE REGISTRAR: Please come to order.

4 This hearing is again in session. Be seated, please.

5 MS. HARVIE: Mr. Chairman, we have
6 determined that Interrogatory 6.26.148, there was not a
7 supplementary question asked, but apparently a new and
8 improved answer was in the works, and we have now filed
9 this with Mr. Lucas, and I've left two copies with Mr.
10 Castrilli.

11 What we have done is we have left the
12 original response on the page, and just inserted the
13 new and improved version.

14 THE CHAIRMAN: So what will we do with
15 the new improved version? Just replace it as the
16 interrogatory answer? Is that satisfactory, Mr.
17 Castrilli?

18 MR. CASTRILLI: Mr. Chairman, we could do
19 that, or we could simply make this new answer an A,
20 whatever the particular exhibit number is.

21 THE CHAIRMAN: Well, let's do it that
22 way, then we preserve the continuity.

23 MR. CASTRILLI: Unfortunately I don't
24 have the original number in front of me.

25 THE REGISTRAR: 367.62.

1 THE CHAIRMAN: Is that what it was?

2 THE REGISTRAR: Yes.

3 THE CHAIRMAN: All right, then it should
4 be 62A.

5 ---EXHIBIT NO. 367.62A: Improved version of 367.62.

6 MR. CASTRILLI: Mr. Chairman, we broke
7 off at maybe an important point in this hearing. As I
8 noted at the outset before the break, the remainder or
9 virtually the remainder of my cross-examination deals
10 with the issue of mitigation, and perhaps we should
11 take it one question at a time and see where we go.

12 THE CHAIRMAN: My main concern was with
13 repetition of the nature of the question. Once Hydro
14 says what they've done, whether it's right or wrong, in
15 accordance with the Act or not, then that's the
16 situation. I don't think it helps us to have it
17 repeated.

18 I have some difficulty in seeing how
19 mitigation is even appropriate in a generic hydraulic
20 plan, because I don't see how you can even talk about
21 mitigation without being involved in the site itself.

22 I must say I'm speaking entirely for
23 myself on that, I haven't talked to my colleagues about
24 it, but I have some real difficulty in seeing how
25 mitigation, which comes at the end of the process, as

1 it were, has to be thought of in terms of the very
2 specific sites you're on, and general mitigation in
3 generic terms -- there may be some things you can do,
4 and these have been mentioned in the evidence, there is
5 some physical things you can do and some social things
6 you can do. And they've been talked about in general
7 terms. But to talk about them specifically would be, I
8 think very, very difficult.

9 MR. CASTRILLI: Mr. Chairman, why don't
10 we proceed on a question by question basis. I have the
11 gist of your concern with respect to this. Let me just
12 simply say, speaking for my clients, we do not
13 necessarily share the opinion you've just expressed,
14 and we want the opportunity to put that in the record
15 in evidence.

16 So I suspect were it to be otherwise, you
17 would not only be hearing from myself with respect to
18 this but there would be other parties would want to
19 make submissions to you on this issue.

20 In addition to the fact we already have
21 numerous exhibits on the record in chief from Ontario
22 Hydro dealing with the issue of mitigation, remediation
23 and compensation. So why don't we just proceed on a
24 question by question basis?

25 THE CHAIRMAN: But as you know, this

1 whole area was canvassed very, very exhaustively in the
2 so-called scoping exercise that went on prior to the
3 hydraulic hearing, and that was intended to define the
4 extent of what this hearing is all about, as opposed to
5 what site-specific hearings are all about.

6 MR. CASTRILLI: I have your views, Mr.
7 Chairman. Why don't we proceed on a question by
8 question basis, and I will try and steer between the
9 shoals, as it were.

10 THE CHAIRMAN: All right.

11 MR. CASTRILLI: Q. Ms. Quinn, we're
12 still in Exhibit 374, and we're now at page 93. And
13 actually just for a bit of context for you, Ms. Quinn,
14 at page 91 of this exhibit, this is under the general
15 heading of "Typical Environmental Concerns and
16 Mitigation," and what we're looking at is on page 93.
17 We're looking at the top two paragraphs on the page,
18 and they say as follows:

19 Concerns and controls, for example
20 erosion protection, fish handling
21 identified and incorporated during the
22 design and construction phases of a
23 projects life can do much to review the
24 potential for major environmental
25 disruption.

1 To this end, guidelines are presently
2 being developed to help to reduce impacts
3 during construction. Unfortunately many
4 of the environmental problems that arise
5 cannot be adequately confirmed prior to
6 i.e., during EA studies, site
7 developments or particularly station
8 operation. It often takes several years
9 of operating experience to fully
10 understand the magnitude of the problems
11 or identify any optimal remedial
12 measures.

13 MR. McCORMICK: A. Excuse me, we've lost
14 you. Could you start again? Which paragraph, page
15 number?

16 Q. I'm sorry, I'm on the top two
17 paragraphs of page 93 of Exhibit 374. Are you with me?
18 All right, I'll repeat the beginning of the second
19 paragraph.

20 Unfortunately many of the
21 environmental problems that arise cannot
22 be adequately confirmed prior to i.e.,
23 during EA studies, site development or
24 particularly station operation. It often
25 takes several years of operating

1 experience to fully understand the
2 magnitude of the problems or identify any
3 optimal remedial measures.

4 I think that's all I need to read.

5 Now this was an assessment that was
6 written in 1982, and Mr. McCormick, can you advise the
7 Board whether, and in particular with respect to the
8 issue that was stated in the second paragraph, that
9 many environmental problems cannot adequately be
10 confirmed prior to site development and operation, is
11 that a view that Ontario Hydro still agrees with?

12 A. The reference to station operation I
13 personally would not agree with. The concept of
14 development encompassing site specific environmental
15 assessment, certainly issues and effects are identified
16 through the course of that exercise. We have, though,
17 a good overview of the types of problems that might
18 occur. Such that we know what we're looking for during
19 site-specific environmental assessment.

20 Q. So I'm not quite sure of why the view
21 that's expressed on page 93 is something you say has
22 changed. What's changed in the intervening nine years?

23 A. We've written about four or five
24 project specific environmental assessments, we've done
25 numerous studies under class EAs, our experience has

1 changed considerably.

2 Again, I'll remind you that this was a
3 draft report that was never issued. It is
4 developmental thinking. It took place many years ago
5 involving people that aren't necessarily involved in
6 the planning today.

7 Q. You've done four or five EA's --
8 sorry, maybe you should tell me which ones you're
9 referring to, because as far as I can tell you haven't
10 built any hydraulic facilities since 1977. I believe
11 that was the evidence in Panel 2.

12 A. We are now building Big Chute, we
13 have constructed several dam redevelopments done under
14 class EAs. The experience gained under environmental
15 assessment, just the nature of the process is such that
16 in working together with government agencies and
17 affected peoples, one reaches reasonable agreements on
18 the appropriateness of predictions and mitigation.
19 There is always a sense that all the bases have been
20 covered.

21 Q. Well, then can we take it, Mr.
22 McCormick, that as a result of this experience in
23 producing four or five EAs, and building I guess at
24 least one project, Big Chute, that you now have some
25 environmental monitoring information that would confirm

1 the preassessment predictions that you would like to
2 share with us?

3 A. Big Chute is being constructed, and
4 monitoring of construction activities is going on. I
5 think in the interrogatories we've indicated, in
6 interrogatory responses, that we have done some level
7 of monitoring on redevelopments. I think our state of
8 knowledge will be much better when the larger projects
9 are built and the proposed monitoring programs
10 implemented, and we do get an excellent before and
11 after analysis of effects.

12 Q. So you're not at this point in time
13 there yet, is that a fair conclusion?

14 A. We're as far as we need to be to be
15 confident in our predictions.

16 Q. Is there any document that you can
17 refer us to that constitutes a host project assessment
18 of the effectiveness of the preproject evaluations?

19 A. I'm aware of studies that have been
20 done by the Canadian Electrical Association on that
21 topic.

22 Q. I'm sorry, is that something that is
23 now in evidence? Is it a document that we filed?

24 A. I couldn't tell you. It probably has
25 not been.

1 Q. Perhaps we could have an undertaking
2 to provide us with a copy of the document you're
3 referring to. It's not one we're previously familiar
4 with.

5 A. I'll take an undertaking on that
6 document --

7 THE CHAIRMAN: Sorry, there was an EA
8 document that was referred to earlier. Maybe that's
9 the one the witness is referring to.

10 MR. CASTRILLI: Mr. Chairman, we have an
11 Exhibit 372 that was filed by Ms. Kleer during her
12 cross-examination. I don't know if that's the document
13 that Mr. McCormick is referring to. Perhaps he can
14 confirm that and advise us. If there is another
15 document that he's referring to, then I would like the
16 undertaking.

17 MR. MCCORMICK: That is the document.
18 This is Exhibit 372.

19 MR. CASTRILLI: All right, that's fine,
20 thank you.

21 [12:00 p.m.]

22 Q. Now, Mr. McCormick, you will recall
23 there was phraseology used in Exhibit 374, optimal
24 remedial measures, is the work that you have been
25 referring to what you say supports -- let me withdraw

1 that partial question and rephrase it.

2 Has Ontario Hydro undertaken any work on
3 which to base a conclusion that it now has optimal
4 remedial measures in place?

5 MR. McCORMICK: A. We do not use the
6 term "optimal" as part of our normal EA terminology.

7 Q. Let me refer to you page 154 of the
8 binder.

9 Mr. Chairman, this is Interrogatory
10 6.10.48, and the attachment at page 155 should also be
11 a part of that next exhibit.

12 THE REGISTRAR: 367.67.

13 ---EXHIBIT NO. 367.67: Interrogatory No. 6.10.48.

14 MR. CASTRILLI: Q. Ms. Quinn, this is
15 the Ontario Hydro Corporate mitigation and compensation
16 policy for adverse environmental effects. I am not
17 sure if it has been previously filed by Ontario Hydro
18 but I assumed it hadn't. Can you confirm for me that
19 this policy applies to hydraulic development in the
20 construction, operation and maintenance phases?

21 MS. QUINN: A. It applies to all of
22 Ontario Hydro activity.

23 Q. All right. It also applies to all
24 phases of all Ontario Hydro activities?

25 A. Yes, it does.

1 Q. Thank you. Now, there is a heading
2 in the middle of the page entitled Governing Principle
3 which says:

4 Where Ontario Hydro's activities do or
5 are likely to create significant adverse
6 environmental effects with resultant
7 impact on the public, Ontario Hydro will
8 assess the impact and may provide
9 suitable mitigation or compensation to
10 the affected parties.

11 Just stopping there. Even where Ontario
12 Hydro activities do create significant adverse
13 environmental effects with resultant impact on the
14 public, it's still discretionary with Ontario Hydro as
15 to whether suitable compensation or mitigation is going
16 to be provided?

17 A. I'm sorry, can you repeat the
18 question?

19 Q. Just paraphrasing a portion of the
20 governing principle I just read into the record. Is it
21 fair to say that even where Ontario Hydro's activities
22 do create significant adverse environmental affects
23 with resultant impact on the public, Ontario Hydro only
24 may provide suitable mitigation or compensation?

25 MS. PATTERSON: Isn't this a legal

1 question, Mr. Castrilli? We all know that there are
2 conditions to any approvals that might be given to
3 Hydro that would include mitigation.

4 MR. CASTRILLI: Well, it's not a legal
5 document, Ms. Patterson. It's a voluntary policy as
6 far as I understand it, so I don't see that it requires
7 a legal mind in particular. Ms. Quinn did introduce
8 quite a few policies, other policies of Ontario Hydro's
9 in examination in chief, so I presume she can speak to
10 this one. She maybe even filed this one in examination
11 in chief for all I know.

12 DR. CONNELL: Mr. Castrilli, this policy
13 is set in a much broader context which your question
14 doesn't seem to recognize. That's the problem that I
15 have.

16 MR. CASTRILLI: Well, Ms. Quinn has
17 advised us that this policy applies to all phases and
18 all types of Ontario Hydro activities, so I assume it
19 applies to hydraulic in the construction, operation and
20 maintenance phases.

21 MS. QUINN: Yes, it does, and it is the
22 policy that we have relied on in our project-specific
23 work to make suggestions about impact management, and I
24 refer you to the Little Jackfish environmental
25 assessment and the Mattagami environmental assessment.

1 MR. CASTRILLI: Q. Ms. Quinn, my
2 question though is why --

3 THE CHAIRMAN: Now we can all get into
4 it. I think the language is clear. It is
5 discretionary. You may ask her why it is or if she
6 agrees with it being, but it seems to be it is clear it
7 is discretionary.

8 MR. CASTRILLI: That was my next
9 question.

10 Q. I wanted to know why in the context
11 where it is clear that on the face of this paragraph
12 there would be or there is significant adverse
13 environmental effects, it isn't mandatory that Hydro
14 provide suitable compensation and mitigation?

15 MS. QUINN: A. I have a few thoughts,
16 one is that we would certainly do our best effort. And
17 the notion of suitable is something that perhaps is
18 determined by the affected parties, by provincial
19 governments or ministries that have standards that we
20 would have to meet as a corporation. There might be
21 interpretation that a hearing board would also have,
22 and these could all vary.

23 But on behalf of the Corporation I could
24 say we would do our best efforts.

25 The other thought is that there might be

1 circumstances where since the time and effect has been
2 created there has been a shift in authority and it's
3 some other party's responsibility to look after this
4 area. I am just aware of the interactions between the
5 provincial government and the Ontario government at
6 this time.

7 I can't really say much more. But it's
8 not beyond me to envision the fact that other parties
9 in Ontario Hydro are the ones who specifically provide
10 the compensation or mitigation, or whatever it is that
11 may be involved, and this policy does permit more than
12 just monetary payments. There are other actions that
13 are envisioned, permitted by this policy, and it may be
14 the authority of another part of the provincial
15 government, federal government, even perhaps a
16 municipal government to step in and provide the
17 appropriate impact management activity.

18 Q. Ms. Quinn, do I have it that this
19 policy went into effect in 1983?

20 A. Yes, that's correct.

21 Q. Can you provide us with the track
22 record arising out of this policy as it relates to
23 hydraulic, vis-a-vis either mitigation or compensation
24 for existing facilities since the date this policy went
25 into effect?

1 A. No, I can't.

2 Q. Well, I mean, I know you can't at the
3 moment. Can you by way of undertaking give us your
4 best efforts to provide us with some information as to
5 what has been done under this policy vis-a-vis existing
6 mitigation and compensation since the policy went into
7 effect in relation to hydraulic only?

8 A. I am assuming that you are interested
9 in hydraulic as it relates to new and existing
10 facilities or proposed and existing facilities?

11 Q. No, no. Just in relation to existing
12 facilities.

13 Let me make it even more specific, only
14 in relation to Aboriginal people.

15 A. I think, Mr. Castrilli, that you have
16 our answer on that already in interrogatories. I
17 suppose I could name them for you.

18 We don't have specific studies that would
19 cover the whole question that you have asked. I can
20 provide you with some information on some claims that
21 have been resolved, some claims that are under way,
22 some discussions that are in early stages, some groups
23 that are forming to consider these matters, but I don't
24 know if that's what you are asking for with your
25 reference to track record.

1 Is that the kind of thing you are
2 thinking of?

3 Q. Yes. Now, you said we may already
4 have some this in an answer to an interrogatory, if
5 some of it is already in an answer then may be you can
6 refer us to the interrogatory.

7 A. Yes, if you can give me a second, I
8 will just get the numbers for you.

9 I am going to refer to a few. One
10 interrogatory is 6.26.21.

11 MR. CASTRILLI: Mr. Chairman, that is
12 found at page 202 of the Volume 2 binder. Perhaps we
13 could make that an exhibit.

14 THE REGISTRAR: 367.68.

15 ---EXHIBIT NO. 367.68: Interrogatory No. 6.26.21.

16 MS. QUINN: Another one is 6.2.12.

17 MR. CASTRILLI: I'm sorry, Ms. Quinn,
18 that was?

19 MS. QUINN: 2.12.

20 THE REGISTRAR: 6.2.12?

21 MS. QUINN: Yes, that's correct.

22 THE REGISTRAR: 367.69.

23 ---EXHIBIT NO. 367.69: Interrogatory No. 6.2.12.

24 MS. QUINN: Another one is 6.2.135.

25 THE REGISTRAR: 6.2.135 is 367.70.

1 ---EXHIBIT NO. 367.70: Interrogatory No. 6.2.135.

2 MS. QUINN: Another one is 6.2.127.

3 THE REGISTRAR: 367.71.

4 ---EXHIBIT NO. 367.71: Interrogatory No. 6.2.127.

5 MS. QUINN: Another is 6.11.16.

6 THE REGISTRAR: 367.72.

7 ---EXHIBIT NO. 367.72: Interrogatory No. 6.11.16.

8 MS. QUINN: Another is 6.26.66A.

9 THE REGISTRAR: 6.26.66 is 73.

10 MS. PATTERSON: 66A.

11 MS. QUINN: Yes, I have a 66 and I
12 believe there is a 66A as well. I just have in front
13 of me 66. I wonder if I might just asked my fellow
14 witnesses if they could help me on this point.

15 Maybe if we can move on to another of
16 others, we can come back to that specific one to
17 confirm whether it's 66 or 66A.

18 ---EXHIBIT NO. 367.73: Interrogatory No. 6.26.66A.

19 MR. CASTRILLI: That is fine, Ms. Quinn.

20 MS. QUINN: Would you like me to carry
21 on?

22 MR. CASTRILLI: Q. If there are more, I
23 was thinking a more expeditious way to do this would be
24 for you to simply over the break to provide us with the
25 list and then we can file the list as an exhibit rather

1 than have you go individually through this.

2 MS. QUINN: A. Yes. Well, this just
3 deals with grievances there. The answer that you
4 referred to will involve a more extensive response,
5 some of which has not yet been introduced into the
6 hearing.

7 MR. CASTRILLI: Perhaps, Mr. Chairman, in
8 the circumstances we might do that by way of
9 undertaking to speed this up.

10 MS. QUINN: I would just like some
11 clarification, Mr. Castrilli, if you can be more
12 specific about what it is you would like.

13 MR. CASTRILLI: Q. It's been so long
14 since I asked the question, I have forgotten what the
15 answers were in relation to.

16 I believe the question was in relation to
17 what has been the Ontario Hydro track record with
18 providing mitigation or compensation pursuant to this
19 policy as it relates to damage arising from existing
20 hydraulic facilities as it would affect Aboriginal
21 people.

22 MS. HARVIE: Mr. Chairman, my sense of
23 this is that the interrogatories provide some
24 information about the claims and grievances and the
25 amount of monetary compensation that has been paid out.

1 Ms. Quinn could perhaps correct me, but
2 my sense of it is that it would be very difficult
3 indeed to track how Ontario Hydro has provided other
4 non-monetary compensation.

5 The policy, as I understand, is applied
6 in the spirit and it would be difficult to follow
7 through from the policy to a specific application and a
8 specific instance beyond of course the payment of money
9 which we have provided you in this list of
10 interrogatories.

11 MR. CASTRILLI: Well, if that's the
12 witness' evidence, then I will accept that, and she can
13 provide me with a list of whatever she does have at her
14 convenience.

15 MS. QUINN: Okay, thank you.

16 THE CHAIRMAN: That's with respect to the
17 monetary payments.

18 MR. CASTRILLI: Yes. It seems the answer
19 will be only in relation to monetary.

20 THE REGISTRAR: Is that an undertaking,
21 Mr. Chairman.

22 THE CHAIRMAN: That's an undertaking.

23 MR. ROGERS: That will be 366.7.

24 MS. HARVIE: I'm sorry, perhaps I am not
25 understanding. That is to complete the list of

1 interrogatories referring to monetary compensation.

2 MR. CASTRILLI: Yes. Because I
3 understand Ms. Quinn having adopted your submission as
4 her evidence, that she wouldn't be in a position to do
5 it in relation to mitigation.

6 THE CHAIRMAN: We are talking about
7 social as opposed to physical, I take it; is that
8 correct?

9 MS. HARVIE: These interrogatories relate
10 to both social and physical compensation, washed out
11 roads, social losses.

12 ---UNDERTAKING NO. 366.7: Ontario Hydro undertakes to
13 provide a complete the list of
14 interrogatories referring to monetary
15 compensation as a result of damage
arising from existing hydraulic
facilities as it would affect Aboriginal
people.

16 MR. CASTRILLI: Thank you.

17 Q. Ms. Quinn, continuing with exhibit
18 367.67 and moving down the page, we are under the
19 heading of Decision Rules, it is just the next heading
20 below governing principle. The first decision rule is
21 that Ontario Hydro will meet the requirements of
22 applicable legislation. And in the testimony of Ms.
23 Ryan in Panel 2, I understood her testimony to be that
24 Ontario Hydro would try to go beyond applicable
25 legislation wherever it could. This can be found in

1 Volume 16 at pages 2743 and 2744.

2 MS. PATTERSON: Isn't that what this
3 says, the decision rules would go on to the No. 2 which
4 talks about these other acting-upon effects.

5 MR. CASTRILLI: Ms. Patterson, that's
6 what I was trying to clarify.

7 Q. Is No. 2 meant to mean that in fact
8 Ontario Hydro would go beyond the requirements of
9 applicable legislation with respect to mitigation
10 pursuant to this policy?

11 MS. QUINN: A. Yes. In fact our
12 project-specific environmental assessments do that.
13 And in my direct evidence I made the point that there
14 are view few, if any, standards in provincial
15 legislation, other than I believe to do with health,
16 that Ontario Hydro really has to meet.
17 [12:17 p.m.]

18 So what we do in terms of community
19 impacts is voluntary.

20 I would refer you to that part of my
21 direct evidence that sets out the seven or eight types
22 of activities that we call impact management.

23 MR. CASTRILLI: Q. Right, that was part
24 of your evidence on mitigation in examination in chief,
25 is that right?

1 MS. QUINN: A. Yes, but I should just
2 point out for you Mr. Castrilli, that the specific word
3 mitigation for me means dealing with adverse impacts.
4 The term impact management includes that as one
5 activity, and there are six or seven other activities
6 under that broad heading.

7 Q. All right, thank you for the
8 clarification.

9 Could I ask you to refer to table C-6 of
10 Exhibit 4? We are looking at page C-14 of that
11 exhibit. This is under the heading of Land Use, and
12 it's under the column Potential Mitigation. We are
13 looking at, it says Wildlife Relocation.

14 First of all, the three columns that form
15 this table are component potential effects and
16 potential mitigation.

17 Under the heading of potential effects
18 with respect to land use, there isn't anything that
19 says wildlife impacts are identified as potential
20 effects, but I assume that is something to be read into
21 that column in light of what we see under potential
22 mitigation? That in fact one of the mitigation
23 initiatives in appropriate circumstances would be
24 wildlife relocation?

25 MR. McCORMICK: A. Yes.

1 Q. And the analysis clearly makes the
2 judgment that with respect to wildlife impacts, they
3 are capable of being mitigated, since we have them
4 under that column. And just moving to page C-15, and
5 this is now under the heading -- I guess it must be
6 under the component water, and under the potential
7 effects, destruction of aquatic habitats and fish stock
8 degradation, that these impacts are also viewed by
9 Ontario Hydro as capable of being mitigated, because we
10 see a series of potential mitigation measures outlined
11 under the third column?

12 A. The purpose of this table was to
13 compare options, the table is structured such that the
14 categories for a coal-fired station or a nuclear
15 station were in some way comparable. It is there for
16 illustrative purposes. None of the implications that
17 you're suggesting are there.

18 Q. Sorry?

19 A. The fact that it was structured in a
20 way to be comparable with other options is the reason
21 why land use and the generation site, for example will
22 cover a broad range of activities, its effects. The
23 mitigation isn't intended to be all inclusive. It is
24 just illustrative. These are some of the types of
25 mitigation options that are available.

1 Q. I think you simply confirmed what I
2 think I said. I take your point that the list of
3 mitigation measures under potential mitigation is not
4 meant to be exhaustive, but they are meant to apply to
5 what's in the column in the middle. So I was not
6 confused by that.

7 A. I think that's true.

8 DR. CONNELL: Could I just understand?
9 We are, I presume, working with the definition in
10 Exhibit 367.67, which is that mitigation is any
11 activity that will eliminate or reduce the severity?
12 It's not just to eliminate, it also embraces reducing
13 severity? is that understood as between counsel and
14 the panel?

15 MR. MCCORMICK: That's the way that we
16 would understand it.

17 MR. CASTRILLI: I'm sorry, is that a
18 question to me?

19 DR. CONNELL: I just wondered in putting
20 the question, whether you were using that definition or
21 if you had in mind some other definition.

22 MR. CASTRILLI: I'm prepared to accept
23 whatever definition of mitigation the witness says is
24 his definition of mitigation. If he says it's what is
25 included under Exhibit 367.67, then that's his

1 evidence, then I accept that, subject to testing later.

2 Q. Looking at table C-6 as a whole as it
3 relates to hydraulic, Mr. McCormick, would you agree
4 with me that it does not identify archaeology or, for
5 example, Aboriginal burial grounds or other Aboriginal
6 heritage resources as being potentially subject to
7 adverse effects, let alone potential mitigation?

8 MR. MCCORMICK: A. We are unable to find
9 it here, but that doesn't mean to suggest that studies
10 would not be undertaken on a site specific level.

11 Indeed very extensive studies are.

12 Q. So somewhere on table C-6, it would
13 be appropriate to, at least implicitly, conclude that
14 archaeology should be identified as being capable of
15 being potentially affected, for example, Aboriginal
16 burial grounds?

17 A. Again, the purpose of the table is to
18 compare options, and these sorts of effects aren't
19 necessarily common to every activity, every option and
20 every location.

21 Q. I'm sorry, what do you mean by
22 option?

23 A. Hydroelectric station versus a
24 coal-fired station. As you can see, the headings on
25 the table are broken into combustion turbines, IGCC,

1 combined cycle, I think there's nuclear, there's
2 purchases, there's a lot of different generation
3 options in these tables.

4 Q. That's right.

5 A. And the tables were structured for
6 comparative purposes.

7 Q. That's right, but I'm looking at the
8 part of the this table that deals with hydraulic, and
9 I'm trying to determine where it is you dealt with
10 archaeological impacts, and I think I have your answer
11 that it's not there.

12 A. It could be encompassed in the
13 heading Special Sensitive Interests on the top of page
14 C-16, native people, land claims, land use.

15 Q. Could I refer you, Mr. McCormick, to
16 Exhibit 374 again? We are actually looking at page
17 A-39.

18 MS. QUINN: A. Mr. Castrilli, before you
19 move on, if I could just draw your attention to page
20 3-5 of the environmental analysis, where we have
21 defined our headings?

22 Q. I'm sorry, one moment. That was page
23 3-5?

24 A. Yes. The column on the right. And
25 it's the section where the criteria are defined.

1 Q. Under which sub-heading?

2 A. Special and Sensitive Groups, there's
3 a reference to cultural heritage, and I believe
4 archaeology would fit under that broad reference.

5 Q. All right, thank you.

6 Now, do you have page A-39, Mr.

7 McCormick?

8 MR. McCORMICK: A. Yes, I do.

9 Q. Of Exhibit 374?

10 This is a table entitled "Potential
11 Effects of Hydro Development on Other Uses," and there
12 are a series of columns.

13 THE CHAIRMAN: I'm not sure what is the
14 source of this table or who prepared it or who put it
15 forward. Do you know?

16 MR. CASTRILLI: This is the Ontario Hydro
17 document.

18 THE CHAIRMAN: It is an Ontario Hydro
19 draft document, I recognize that. But is this an
20 appendix. I wondered what this was or where it came
21 from or who prepared it or what? I'm just trying to
22 find it -- I don't know where this appendix begins,
23 but --

24 MR. CASTRILLI: My understanding, it's
25 all part of the same document.

1 THE CHAIRMAN: No, it's part of the same
2 document, though.

3 MS. PATTERSON: Appendix A and appendix
4 C.

5 THE CHAIRMAN: Part of it is a Royal
6 Commission, and I don't know where it all comes from.
7 I don't think it matters

8 MR. CASTRILLI: It is appendix C of
9 Exhibit 374.

10 THE CHAIRMAN: Just ask the question you
11 want to ask.

12 MR. CASTRILLI: All right.

13 Q. Mr. McCormick, do you agree that this
14 table we find at page A-39 characterizes potential
15 effects and mitigation possibilities for selected types
16 of activities, such as fisheries and wildlife?

17 MR. MCCORMICK: A. It attempts to. I'm
18 not sure that it's consistent with our current
19 thinking.

20 Q. Yes. I wanted to ask you about that.

21 Looking at fisheries under Cold Water
22 Species, the first item on the page, it notes that
23 there would be a negative impact to fisheries arising
24 from hydraulic development, and then under the last
25 heading, Mitigation Possibility, and there are three

1 subheadings under that column, "all," "part" and
2 "none," this particular table indicates that there
3 would be no mitigation possibility in relation to
4 impacts from hydraulic on cold water fish species.

5 A. That's in appropriate.

6 Q. I'm sorry, it's what?

7 A. This is not true.

8 Q. This is not true. How is it not
9 true?

10 A. There are mitigation opportunities
11 that can be used to protect cold water species.

12 Q. I see. And are those the ones we
13 find in table C-6 of the environmental analysis?

14 A. Table C-6 was there for illustrative
15 purposes to compare with other options. If cold water
16 species was not a consideration with the other options,
17 it wouldn't be here. And again, we didn't believe that
18 it was a major affect on a generic level.

19 Q. Well, what happened between 1982 and
20 1989.

21 THE CHAIRMAN: I think if you are going
22 to get into this you're going to have to identify what
23 this table is, because I don't know what it is, and I
24 don't know who prepared it, and I think the witnesses
25 ought to know that.

1 This was a draft document prepared by
2 someone that never was an official Hydro document, and
3 this is an appendix. I don't know where it comes from.

4 MS. HARVIE: May I also point out, Mr.
5 Chairman, that a number of these documents that this
6 group have filed as exhibits were not provided through
7 interrogatory responses, but were obtained in our
8 public reference centre, which is the place where all
9 documents draft and otherwise are filed for internal
10 use.

11 MR. CASTRILLI: So what?

12 THE CHAIRMAN: Well, I just want you to
13 identify, Mr. Castrilli, what this table is. I think
14 it is meaningless to waste our time at cross-examining
15 on what those conclusions are.

16 MR. CASTRILLI: Mr. Chairman, this is
17 table C. It is part of an appendix entitled "Typical
18 Environmental Concerns and Mitigation Hydro Electric
19 Generation."

20 THE CHAIRMAN: But there is no indication
21 that I can see as to who authored it or where it came
22 from or why it's an appendix or anything.

23 MS. PATTERSON: It's no longer relevant.

24 THE CHAIRMAN: I don't think it is
25 particularly relevant, as Ms. Patterson says. I think

1 we should...

2 MS. PATTERSON: I think you've gone on
3 beyond this anyway, haven't you? You're now on to what
4 mitigation opportunities there are for cold water
5 species.

6 MR. CASTRILLI: Well, that's right.

7 Mr. Chairman, just so there is no
8 misunderstanding, we have in the environmental analysis
9 in 1989 a series of potential effects in relation to
10 various facets of the social and cultural environment,
11 which Ontario Hydro provides a column for called
12 Mitigation Potential. The assumption therefore being
13 that the impacts are mitigatable.

14 In this document, i.e., Exhibit 374, in a
15 comparably designed table a period seven years earlier
16 they indicate with respect to some of the same facets
17 of the social and cultural environment, that there was
18 no mitigation possibility or possible.

19 THE CHAIRMAN: First of all they don't
20 indicate it, at least the evidence isn't that they
21 indicate it. C-2 is not Hydro's position necessarily.

22 I think you have to tell me, and I'm not
23 going to go through this 1982 document, Exhibit 374, to
24 find out where table C-2 comes from. But I think
25 unless you do that, it is a completely meaningless

1 piece of paper, as far as I'm concerned.

2 MR. CASTRILLI: Mr. Chairman, my
3 understanding is that we filed the entirety of Exhibit
4 374.

5 THE CHAIRMAN: It is here, but I haven't
6 gone through it, and I haven't got the time to go
7 through it. And I want you to tell me where C-2 comes
8 from and whose it is and what the appendix is and how
9 it's set up. I mean just to throw a piece of paper in
10 front of the witnesses and expect them to answer
11 questions is not fair to the witnesses.

12 MR. CASTRILLI: Well, Mr. Chairman,
13 perhaps I can deal with this over the break and deal
14 with it in the afternoon, but...

15 THE CHAIRMAN: Perhaps that would be the
16 best thing for you to do.

17 MR. CASTRILLI: We have filed the entire
18 document, and it is an Ontario...

19 THE CHAIRMAN: Yes, I know that.

20 MR. CASTRILLI: Mr. Chairman, I wonder if
21 I might have your indulgence with an early break and
22 that we might resume at 2:00?

23 THE CHAIRMAN: It does create a bit of a
24 problem, I'm afraid. Can't you go on to something
25 else?

1 MR. CASTRILLI: Well, I can probably go
2 on to something else, and I'll have to come back. Just
3 give me a moment's indulgence.

4 THE CHAIRMAN: We can stop around ten to,
5 if that's okay.

6 MR. CASTRILLI: Q. Can I refer you, and
7 I'm not sure, this might be Ms. Basu Roy, page 176 of
8 the binder? It's exhibit -- sorry, interrogatory
9 6.26.26.

10 THE REGISTRAR: 367.74.

11 THE CHAIRMAN: 74? Thank you.
12 ---EXHIBIT NO. 367.74: Interrogatory No. 6.26.26.

13 MR. CASTRILLI: Q. Ms. Basu Roy, if
14 you're the appropriate person for me to be asking this
15 question of, can I take it from Exhibit 367.74 that
16 evaluation of mitigation measures is done during
17 definition phase of specific projects, and that you do
18 not get to a specific amount for mitigation for a
19 project until you are at the definition phase?

20 MR. FLOOK: A. Perhaps I can help. Yes,
21 that's correct.

22 Q. And just moving to the next page, at
23 page 177, which is interrogatory 6.26.365...

24 THE REGISTRAR: The number is 367.75.
25 ---EXHIBIT NO. 367.75: Interrogatory No. 6.26.365.

1 [12:40 p.m.]

2 MR. CASTRILLI: Q. I understand from this
3 interrogatory, now this exhibit, that Hydro has
4 provided a contingency allowance in project estimates
5 to account for unestimated costs including mitigation
6 and compensation measures. I am wondering if you can
7 tell me what is the proportion of the contingency
8 allowance applicable to mitigation?

9 MR. FLOOK: A. I think first of all
10 there is some correction to the interrogatory, there
11 are allowances for some assumed amount of mitigation
12 measures, or compensation allowed for in the estimate
13 per se. The mitigation measures, of course, are
14 included in the direct construction costs whether a
15 physical undertaking as described in direct evidence,
16 the costs of if there was compensation or some
17 community impact agreement or resource use agreement
18 and there is dollars involved it would get allowed for
19 under the engineering section. And unknown amounts
20 also would be covered under the point of contingency
21 which is applied to all, as in my direct evidence, all
22 the different components of the estimate, contingency
23 is applied to it.

24 Q. Perhaps we can get some
25 clarification. Perhaps I could ask you to look at

1 figure 10 of the hydraulic plan, Exhibit 28.

2 Mr. Flook, I am thinking that this figure
3 is one that may have been updated.

4 A. I believe you will see an update that
5 is page 25 in the update.

6 Q. All right, so that will be page 25 of
7 Exhibit 359?

8 A. Correct.

9 Q. So why don't we use the update.

10 Just looking at the Mattagami Complex
11 capital cost for 1991, we see a figure of \$567.7
12 million?

13 A. That's what it says here.

14 Q. If we were to apply the contingency
15 allowance applicable to mitigation to just that line
16 item, vis-a-vis the Mattagami Complex, what would the
17 actual contingency allowance be?

18 A. I believe in the notes down below you
19 will see a statement that those numbers include -- the
20 third note down. No, excuse me.

21 Sorry, I thought when I just glanced down
22 the 10 per cent premium... Approximately 10 per cent,
23 would be included in there for contingency.

24 THE CHAIRMAN: The 10 per cent premium is
25 referring to something entirely different.

1 MR. FLOOK: Correct. When I first looked
2 down I thought the 10 per cent applied to contingency.
3 That is incorrect. You're right, the 10 per cent
4 applied to a premium. The contingency is already in
5 that capital cost indicated, the \$567.7 million.

6 MR. CASTRILLI: Q. I am not quite clear.
7 What is the percentage of the \$567.7 million that is
8 contingency allowance?

9 MR. FLOOK: A. Approximately 10 per
10 cent.

11 Q. It is 10 per cent.

12 THE CHAIRMAN: Is that contingency for
13 mitigation and compensation or just one?

14 MR. FLOOK: It's for everything. It
15 could be variations in unknown, engineering costs,
16 things that may occur in the direct construction cost,
17 so the 10 per cent is applied to the total amount of
18 money.

19 THE CHAIRMAN: So it's the 10 per cent
20 that you referred to in your direct evidence.

21 MR. FLOOK: Yes.

22 MR. CASTRILLI: Q. All right, Mr. Flook,
23 I was going to refer to you figure 12-2 of Exhibit 3,
24 which is the DSP, but I suspect you have also updated
25 that. Maybe we should refer then to the appropriate

1 update for figure 12-2, if you have that.

2 THE CHAIRMAN: Is it figure 12-2?

3 MR. CASTRILLI: Yes, figure 12-2 in the
4 DSP.

5 Q. Can you tell me, Mr. Flook, what the
6 updated figure is for that?

7 MR. FLOOK: A. That is the table on page
8 25 that are looking at, I believe.

9 Q. So that updates 12-2 as well.

10 Sorry, that can't be right. Is that
11 right?

12 MS. BASU ROY: A. Page 25 of Exhibit 359
13 is intended to be an update of figure 12-2 of the DSP.

14 Q. All right. We have been speaking
15 about the contingency allowance, now I am directing
16 your attention to figure 3 of Exhibit 359 which is on
17 page 25, did you include this contingency allowance in
18 the project estimates to develop all of the cost
19 benefit ratios we see in figure 3?

20 A. The cost benefit ratios do include a
21 contingency allowance.

22 MS. PATTERSON: On Exhibit 362 at page 14
23 where we have got the hydroelectric capital cost
24 estimates, it says at the bottom that the contingency
25 is 10 to 20 per cent of the base estimate. So are we

1 using 10 per cent in all of these on page 25 of Exhibit
2 359 instead of anywhere from 10 to 20 per cent?

3 MR. FLOOK: It's not necessarily always
4 10 per cent. It's a variable amount.

5 MR. CASTRILLI: Q. That was my next
6 question. The contingency allowance is not the same
7 percentage of costs for every hydraulic project in the
8 plan; is that right?

9 MR. FLOOK: A. Not necessarily.

10 Q. Now, refer to page 178 of the binder,
11 which is Interrogatory 6.26.234.

12 THE REGISTRAR: 367.76.

13 ---EXHIBIT NO. 367.76: Interrogatory No. 6.26.234.

14 MR. CASTRILLI: Q. Now, in the second
15 sentence of this answer you indicated that allowances
16 for mitigation of social and environmental effects are
17 included in planning estimates. Is this the same thing
18 as the contingency allowance for unestimated costs that
19 we were talking about in relation to Interrogatory
20 6.26.367, which is now Exhibit 367.75?

21 MR. FLOOK: A. No. As I explained
22 earlier in my response to you, that in correcting the
23 previous interrogatory, is that where the mitigation
24 measure is a direct capital construction, it's included
25 in the direct construction costs, and where it may end

1 up being a monetary amount, it's included in the
2 engineering cost component as indicated in my direct
3 evidence page 15 of Exhibit 362.

4 Q. Can you tell me, Mr. Flook, what
5 categories of mitigation costs are included in these
6 cost estimates?

7 A. I'm sorry, I don't understand your
8 use of the term "category".

9 Q. What types of mitigation costs are
10 included in the cost estimates?

11 A. Well, in the early study process
12 nothing has been identified. It's a judgment that
13 people have applied and an allowance is made in the
14 cost estimates of what they feel in talking with team
15 members is a reasonable amount.

16 As indicated in my direct evidence, as
17 the study process continues on and more information is
18 identified, then particular components are identified
19 in there.

20 MR. CASTRILLI: Mr. Chairman, is this an
21 appropriate place to break now?

22 THE CHAIRMAN: Yes, we can break now. We
23 will come back at 2:30.

24 THE REGISTRAR: This hearing will adjourn
25 until 2:30.

1 ---Luncheon recess at 12:50 p.m.

2 ---On resuming at 2:34 p.m.

3 THE REGISTRAR: Please come to order.

4 This hearing is again in session. Be seated, please.

5 THE CHAIRMAN: Mr. Castrilli?

6 MR. CASTRILLI: Q. I think, Mr. Flook,
7 you might be the most appropriate person for me to ask
8 this question to. I'm referring to page 179 of the
9 binder. And this is Interrogatory 6.26.12, and
10 attached to it, as part of the answer was interrogatory
11 2.9.6.

12 THE REGISTRAR: Give them one number?

13 MR. CASTRILLI: I believe 2.9.6 was
14 actually attached as an interrogatory -- sorry, as an
15 exhibit to one of the Hydro --

16 THE CHAIRMAN: Why don't we put them both
17 in, and then there won't be any confusion.

18 THE REGISTRAR: 6.26.12 is 367.77.

19 ---EXHIBIT NO. 367.77: Interrogatory No. 6.26.12.

20 THE REGISTRAR: And 2.9.6 is 78.

21 ---EXHIBIT NO. 367.78: Interrogatory No. 2.9.6.

22 MR. CASTRILLI: All right, thank you.

23 Q. Mr. Flook, I think before the break,
24 I had asked you what categories of mitigation costs are
25 included in the cost estimates we were referring to

1 earlier. I think I actually meant to ask you what
2 categories of mitigation types are included in the cost
3 estimates as well, and I don't know if that would have
4 affected your answer.

5 THE CHAIRMAN: I have a little difficulty
6 with this question, because as I understand it Hydro's
7 evidence is that they don't estimate mitigation
8 compensation when they are costing a project at the
9 definition stage, but they recognize the possibility
10 that there might be mitigation and compensation
11 payable, and that's captured in their 10 to 15 per cent
12 contingency.

13 So no one sits down and ticks off
14 flooding, wildlife, things of that nature. That's my
15 understanding of their evidence at this point. So
16 perhaps you may want to clarify that, but that's what I
17 took from what they have said.

18 MR. CASTRILLI: Well, I think that's what
19 I've taken from what they've said as well. But what
20 I'm exploring is what is the potential scope of
21 mitigation activities and what that may or may not do
22 to the ultimate cost addition associated with evidence
23 they've already filed.

24 Q. Now, Mr. Flook, particularly in
25 Exhibit 367.78, I've looked for mitigation types or

1 types of mitigation, just in relation to the Abitibi
2 Complex or the Abitibi River, I guess it is, and the
3 Mattagami sites, and the only mitigation category I
4 could come up with is found at page 185 for Abitibi
5 Canyon, and that was protecting pickerel spawning. And
6 apart from that there were no other specific measures
7 for mitigation in relation to either Abitibi or
8 Mattagami, is that correct?

9 MR. FLOOK: A. I believe this
10 interrogatory asked about mitigation measures or
11 identifying non-power constraints effecting operation
12 of existing hydroelectric generating stations. That's
13 what this list is.

14 Q. So am I right, the only one in
15 relation to those two complexes is pickerel spawning --
16 sorry, measures in relation to protection of pickerel
17 spawning?

18 A. I believe this list is complete, yes.

19 MR. SNELSON: A. But this is only a list
20 of operating constraints. It's not a complete list of
21 mitigation measures.

22 Q. Mr. Flook, perhaps you can assist me.
23 Has Hydro filed -- if you were making a distinction
24 between an operating constraint and mitigation, and
25 this exhibit is not meant to be a full list of

1 mitigation measures that are in place now, as Mr.
2 Snelson has suggested, has Hydro actually produced
3 anywhere in the evidence a complete list of mitigation
4 measures similar to what you have here as operating
5 constraints? I mean, does that exist?

6 MR. FLOOK: A. Well, two things, one of
7 which this is specific non-power, as indicated, where
8 some sort of operating constraint is put in place.

9 Mitigation as such becomes part of the
10 site infrastructure if it is a physical thing, and it
11 is not identified as something separate, and there has
12 been no attempt to go through and say what has been
13 done at the various sites.

14 Q. Sorry, Mr. Wigle?

15 MR. WIGLE: A. Maybe I can add
16 something. We have a number of programs in the
17 operational part of the organization that help control
18 impacts. Several are the oil containment program, this
19 is where we're building concrete containers around any
20 oil containing equipment, equipment that contains oil.
21 So that if there is any problem, this oil will not get
22 into the environment at the river; we have an erosion
23 control program, where we are monitoring all downstream
24 channels for erosion that might be caused by our
25 operations; we are involved with the MOE's MISA

1 program, the municipal industrial strategy for
2 abatement; we've had a program under way removing PCBs
3 from all equipment within a hydraulic station.

4 Q. All right, if I might ask, you don't
5 have a list comparable to this for mitigation measures,
6 and part of the reason for that is that they are often
7 built directly into the facility at the time of
8 construction. Some of them are add-ons, such as the
9 one Mr. Wigle has mentioned.

10 MR. FLOOK: A. That is correct.

11 Q. Mr. Flook, perhaps just continuing
12 with you, this morning we were speaking of the
13 contingency, contingency allowance for mitigation. Did
14 Ontario Hydro study the experience gained in other
15 utilities, such as Quebec and Manitoba, with respect to
16 what the magnitude of their contingency allowance is
17 for environmental mitigation measures?

18 A. No, from the point of view of looking
19 at the cost estimating process, we haven't studied
20 those, although we are aware of the happenings in those
21 two jurisdictions, but it is mainly based upon our own
22 experience, and it becomes very site specific.

23 Q. Mr. Flook, just continuing with you,
24 would you agree that among the types of constraints
25 that would result in mitigation costs during

1 construction and operations might include the cost of
2 mitigation measures to maintain a minimum flow?

3 A. That may be a cost of mitigation,
4 yes. That wouldn't show up in the capital cost, of
5 course, that would show up in the operating and
6 maintenance cost.

7 Q. I'd like to refer you to page 189 of
8 the binder. Sorry, this is Interrogatory 6.2.23.

9 THE REGISTRAR: 367.79.

10 ---EXHIBIT NO. 367.79: Interrogatory No. 6.2.23.

11 MR. CASTRILLI: Q. This is an attachment
12 to it that is the 1950 Niagara Diversion Treaty. The
13 reason why I've raised this matter is I assume that
14 among the reasons for maintaining a minimum flow could
15 include, for scenic purposes.

16 MR. FLOOK: A. I think you have to have
17 the timetable of when events happen. Of course the
18 park was created before the generation was there, and
19 as part of the reason, money to operate the park, the
20 right to build hydraulic facilities there was granted
21 to people. And so certainly the park consideration was
22 there before the hydraulic generation was there.

23 Q. Well, just looking at what would be
24 page 192 of Exhibit 367.79, just at really the
25 preamble, it talks about:

1 Canada and the United States recognize
2 their primary obligation to preserve and
3 enhance the scenic route and beauty of
4 the Niagara Falls.

5 I assume it would not have been a good
6 idea to -- sorry, it would have been a good idea and is
7 a good idea to maintain a minimum flow at Niagara
8 Falls.

9 A. Yes, it is a good idea to maintain a
10 minimum flow, that's correct.

11 Q. That's in part what the purpose of
12 the attached document is all about.

13 I also understand, however, correct me if
14 I'm wrong, that Ontario Hydro does not have any idea
15 what the foregone revenues are for retaining the
16 minimum flows at Niagara Falls, is that right? I'm
17 sorry, perhaps it's easiest for you to respond to that
18 question by looking at Exhibit 367.77 at page 180.

19 [2:45 p.m.]

20 MR. WIGLE: A. Maybe I will try and
21 answer that question. I believe the column here says
22 not applicable, and I would like to go back to the
23 treaty, page 192.

24 Q. It says not available.

25 A. Well, not available, not applicable.

1 THE CHAIRMAN: Actually, Mr. Castrilli is
2 right, not applicable is at the key at the end of the
3 schedule.

4 Not available. Mr. Wigle is right. Not
5 available is what it says at the end.

6 MR. CASTRILLI: I believe that's what I
7 said.

8 THE CHAIRMAN: That's what you said. I
9 was right the first time, so were you. (Laughter)

10 MR. WIGLE: If I could add another point
11 here, going back to page 192 of the treaty.

12 There is a hierarchy here of
13 decision-making. I believe Canada and the United
14 States decided the falls flow shall be satisfied first,
15 and then the treaty defined how much would be available
16 for power production. In the fifth paragraph, I
17 believe, on page 192, if I can read it:

18 Realizing that any redevelopment of
19 the Niagara River for power in Canada and
20 the United States of America is not
21 advisable until the total diversion of
22 water which may be made available for
23 power purposes is authorized permanently.

24 So, in developing Niagara we consider the
25 water that's available after the falls flow is decided.

1 MR. CASTRILLI: Q. All right, I think I
2 understand what you are saying. It seems to be
3 consistent with what I thought you and Mr. Flook
4 indicated earlier. It wouldn't be socially acceptable
5 to reduce the minimum flow at Niagara Falls to zero; is
6 that a fair statement.

7 MR. FLOOK: A. That's correct. And the
8 water that is flowing over, the water that is
9 considered for power generation is what is left after
10 that.

11 Q. All right. And I understand that
12 Ontario Hydro also ensures minimum flows for the
13 purposes of accommodating navigation, and perhaps
14 that's most easily dealt with by again referring to
15 page 182. We are looking at the DeCew Falls under
16 Niagara River and under the heading Citizen and
17 Environmental Constraints within which Ontario Hydro
18 Operates. Reduce DeCew discharge to accommodate the
19 regattas any time from May to August each year. In
20 doing that I understand that there is a financial
21 impact to Ontario Hydro of \$100,000.

22 MR. WIGLE: A. That is correct.

23 Q. So that's at least one example of
24 where Ontario Hydro ensures minimum flows for the
25 purposes of accommodating navigation.

1 A. I might add, maybe navigation is not
2 the appropriate word. This a rowing regatta I believe
3 from the various schools and on specified weekends they
4 require a lower flow so that the velocities aren't too
5 high for the rowing championships.

6 Q. So that would it be fair to say that
7 Ontario Hydro should be cognizant then of
8 transportation uses of rivers such as the Abitibi and
9 the Mattagami for hunting, trapping and fishery
10 purposes used by Aboriginal people?

11 MR. FLOOK: A. I think when you start
12 looking into site-specific environmental assessments,
13 yes, you should be.

14 Q. I am not certain I asked this
15 earlier, but has Ontario Hydro studied the effects that
16 previously occurred on navigation on those two rivers
17 systems as a result of the operation of hydraulic dams
18 on those systems?

19 THE CHAIRMAN: I think you're right, you
20 did ask that question this morning.

21 MR. CASTRILLI: I don't remember the
22 answer but I will read it in the transcript.

23 THE CHAIRMAN: If someone remembers the
24 answer they can give it, I think Mr. McCormick gave it.

25 MR. McCORMICK: I described the types of

1 studies that were undertaken and indicated that
2 additional studies were going to be undertaken and were
3 stopped as a result of the postponement. Those studies
4 dealt with matters such as water level fluctuations,
5 depths of water, flow rates, needed to make any
6 judgments on navigational effects.

7 MR. CASTRILLI: Q. Could I refer you,
8 Mr. Flook, to Exhibit 3, page 12-11. I am looking at
9 line 17, the sentence that reads:

10 Because the stations will be designed
11 to maximize the capability of a site they
12 will not be able to run continuously.
13 We asked you an interrogatory about that
14 which is found at page 198 of the binder. It's
15 Interrogatory 6.26.206.

16 THE REGISTRAR: 367.80.

17 ---EXHIBIT NO. 367.80: Interrogatory No. 2.26.206.

18 MR. CASTRILLI: Q. In this interrogatory
19 I believe you are advising us that what the sentence on
20 page 12-11 that I read into the record means is that
21 you put in large turbines to generate more energy and
22 you store inflows in a reservoir and only operate them
23 during certain hours during the day; is that right?

24 MR. FLOOK: A. At certain times of the
25 year.

1 Q. So would it be fair to say that with
2 respect to the Moose River Basin that Hydro is not
3 maintaining any minimum level of flow to keep the
4 downstream at a certain minimum level?

5 A. As part of the proposed projects,
6 that would be one of the things that would be looked at
7 under either the basin or the site-specific EA process.

8 Q. Just as an example, Mr. Flook, in
9 looking at the Mattagami EA, I think we actually
10 included that as an exhibit already, it seemed to me
11 that Ontario Hydro had not included as a potential
12 mitigation measure and as far as I could determine
13 hadn't determined the cost of minimally restricting
14 flows to permit access by boat for Aboriginal people in
15 areas where they might hunt, trap and fish. Is that an
16 accurate statement?

17 MR. MCCORMICK: A. The mitigation
18 proposed in the Mattagami environmental assessment
19 dealt specifically with the effects of the extensions
20 and not the effects of existing facilities. There are
21 processes in place whereby those effects can be
22 evaluated and steps taken.

23 Now, what the Mattagami extensions
24 environmental assessment proposed, and there was
25 mitigation downstream of Kipling, the proposal, by and

1 large, was a release of flows through critical periods
2 which was an fisheries concern and also to maintain
3 existing minimum waters levels such that water levels
4 would not drop below existing levels. That's why I say
5 it related directly to the proposed extensions.

6 Q. Well, just assist me, if you can, for
7 a minute, Mr. McCormick. Can you look at page 48(i) of
8 what is now Exhibit 401.

9 THE CHAIRMAN: Is 401 in your book?

10 MR. CASTRILLI: Yes, it is. As I said it
11 was page 48(i).

12 THE CHAIRMAN: Page 48(i) of your book?

13 MR. CASTRILLI: Yes.

14 Q. This is a table entitled "Resource
15 Use Effects During Operation and Proposed Mitigation
16 Measures", Mr. McCormick, we are looking at the bottom
17 of the page under the subheading of aquatic, the issue,
18 I guess it is, is canoeing/boating, and the predicted
19 effects are noted to include:

20 Conditions will continue to be
21 dangerous below Kipling generating
22 station in spring and difficult in summer
23 due to low water levels. Levels may be
24 shallower on weekends due to five day
25 operations.

1 I am just looking at the proposed
2 mitigation, it's noted that Ontario Hydro will
3 recommend to MNR, that's the Ministry of Natural
4 Resources, that the Mattagami River no longer be
5 advised as a canoe route.

6 Maybe just in conjunction with that, now
7 looking at page 48(ii), which is just the next page of
8 that same exhibit, and if we look at the right-hand
9 column, items C, D and E, all also clearly suggest to
10 me, and I want to know if they suggest to you, that
11 there is not an intention to maintain a minimum flow
12 downstream of the sites?

13 MS. HARVIE: Mr. Chairman, these are
14 extremely site-specific questions.

15 MR. CASTRILLI: Mr. Chairman, I am just
16 using them for illustrative purposes and will not be
17 there very long.

18 THE CHAIRMAN: Well, you can continue
19 with this.

20 MR. MCCORMICK: This is an example of
21 selective use of information to make a point that was
22 not intended.

23 I will go back, the Mattagami
24 environmental assessment addressed the effects of the
25 extensions and not specifically the existing facilities

1 because other mechanisms were in place to deal with
2 that.

3 I said that water levels would not drop
4 below minimum, I stand by that, and there are sections
5 of the EA that very clearly state that.

6 I think all the passage on page 7-11
7 alludes to is that average levels may be slightly less
8 than what the averages are now, but the minimum levels
9 which are important for navigation will not change.

10 If this is a concern I think when it's
11 brought to the attention of Ontario Hydro, Ontario
12 Hydro will look at. In fact, at the time the plan
13 assessment was shut down we were proposing to look at
14 this in considerably more depth.

15 MR. CASTRILLI: Q. Mr. McCormick,
16 perhaps you and I should look at Exhibit 359 together.
17 Page 26 this is your updated figure -- sorry, it's now
18 figure 4, and it is the update of figure 7 in the
19 hydraulic plan report which is Exhibit 28.

20 [3:02 p.m.]

21 Just looking under the column
22 "Incremental Energy" let's look at it for winter
23 off-peak, and I'm just looking at it for the Mattagami
24 Complex, we see four numbers in brackets, 65.7 for
25 Kipling, 79.6 for Smoky Falls, 66.4 for Harmon and 59.4

1 for Little Long. These are negative incremental energy
2 figures, Mr. McCormick?

3 MS. BASU ROY: A. Maybe I can answer
4 that. These energy values that you're seeing here,
5 this is only for the incremental development that will
6 take place. That's not for the total complex.

7 THE CHAIRMAN: So the effect is there
8 will be a decrease in energy, is that correct?

9 MS. BASU ROY: Well, it suggests that
10 distribution of the energy -- this is not then
11 finalized, and it is something that will be reviewed at
12 the site specific EA.

13 MR. CASTRILLI: Q. Well, it's in your
14 Exhibit 359, so I'd like to pursue it for a moment.

15 Don't those four bracketed figures mean
16 that in winter off-peak you'll be holding back even
17 more water than is currently being held back?

18 MS. BASU ROY: A. The figures show a
19 reduction in energy for the winter off-peak over what
20 is currently available from the complex.

21 Q. Does it also mean that during winter
22 off-peak, you will be holding back more water than is
23 currently being held back?

24 MR. SNELSON: A. Yes, on average.

25 Q. Thank you. And that's also true for

1 summer off-peak, except for Smoky Falls, is that right,
2 Mr. Snelson?

3 A. Yes, that's correct.

4 Q. I'm not sure at this point who to
5 ask. I take it that Ontario Hydro did not -- well, Mr.
6 Snelson, let me ask you. You can tell me if you're the
7 right person for me to ask.

8 I take it that Ontario Hydro did not give
9 any consideration in the DSP as to what the mitigation
10 costs would be for maintaining a minimum flow
11 downstream for either the Mattagami or the Abitibi
12 Complexes for any purpose, is that fair?

13 A. The DSP would use whatever was the
14 current estimates of power and energy and the cost for
15 those specific sites that were available at that time.
16 And the degree to which any mitigation measures have
17 been built into that is something which I can't
18 specifically speak to, but it would be whatever was the
19 assumed operating pattern and costs, as predicted at
20 that time.

21 Q. Well, let's just pitch this at this
22 level. Would it be fair to say at the generic level,
23 would it not be fair to begin by establishing a
24 constraint that said, in assessing the attainable
25 potential from a particular river, that you should

1 maintain, or you should ensure that as a threshold a
2 minimum downstream historic flow is required, or is
3 maintained? Is that something that you could not do at
4 the generic level?

5 MR. McCORMICK: A. That is something one
6 cannot deal with the at the generic level. Minimum
7 flows are provided for certain purposes. There is
8 alternative mitigation to minimum flows. You have to
9 look at the specific circumstances. The technology
10 used to determine minimum flows involves a very
11 extensive site specific study, with a consideration of
12 all of the various parameters affecting water levels
13 and flow rates in a specific stretch of river.

14 Q. And I take it, Mr. McCormick, that
15 Ontario Hydro at the DSP level did not examine these
16 other mechanisms that you've referred to for
17 maintaining minimum downstream flows for navigation or
18 any other purpose, is that right.

19 THE CHAIRMAN: You've used two
20 expressions, and I don't know whether there is a
21 distinction. You talk about minimum downstream flows,
22 and then you talk about minimum historic downstream
23 flows, and I think they may be two different things.

24 MR. CASTRILLI: All right, well, why
25 don't I ask -- well, perhaps in Mr. McCormick's answer

1 he can tell me if his answer would differ.

2 Q. But let me ask it in relation to just
3 firstly maintaining minimum downstream flows for
4 navigation purposes without the historic reference.

5 MR. MCCORMICK: A. You'll have to begin
6 again. What was the first part of your question?

7 Q. Sure. Did Hydro, at the DSP level,
8 consider whether other mechanisms for maintaining
9 minimum downstream flows for navigation could be
10 considered?

11 A. The consideration was that there are,
12 for some hydroelectric projects, a need to protect
13 spawning habitat, navigation, whatever, and that there
14 is a range of mitigation options that can be applied,
15 and that consideration would be applied at the site
16 specific level.

17 Q. Mr. McCormick, while I'm talking with
18 you, could I ask you to turn to Volume 83 of the
19 transcript? And we are looking at page 14701 and
20 14702. This actually arises out of a question that Dr.
21 Connell asked you. I believe it is with respect to
22 mercury accumulation in James Bay and Hudson bay.

23 And at the line, beginning at line 3 in
24 your response, you say:

25 "In part there would be a long period

1 of time involved, perhaps in monitoring
2 studies, and the predictions would tend
3 to take it out quite a period of time. I
4 would imagine in the order of 40, 50,
5 perhaps 60 years."

6 I wasn't quite clear there whether you
7 were in fact talking about 40 to 60 years of monitoring
8 studies. Is that what you were referring to?

9 A. I was referring to studies that might
10 span that period of time. It doesn't mean that every
11 year over sixty years it would be done, but certainly
12 it would be done at regular enough intervals to make
13 useful use of that data.

14 Q. But you were referring to monitoring
15 studies there?

16 A. I guess implicit in that, that there
17 would be something measurable to monitor, if that's
18 what you mean.

19 Q. Well, perhaps the easiest way to do
20 this is to refer to you page 19 of Exhibit 359. And
21 this I believe is an update of Exhibit 28 at page A2-1
22 of the horizon or time horizon for natural
23 environmental effects monitoring.

24 I think in Exhibit 28, you didn't make a
25 distinction between extensions and new sites in terms

1 of monitoring costs. In this update you have made a
2 distinction, so that the cost for new site monitoring
3 over a 20-year costing horizon is double what it is for
4 extensions.

5 But leaving that aside for the moment, if
6 the time horizon for monitoring mercury in James Bay is
7 between 40 and 60 years, why would you stop your
8 environmental effects monitoring after year 20?

9 A. I'm sure that was not the intent of
10 this particular table. And I again was not speaking
11 specifically to James Bay.

12 Q. What do you mean you weren't speaking
13 specifically to James Bay, in your answer to Dr.
14 Connell?

15 A. I'm sorry, in my answer to Dr.
16 Connell, it was in relation to James Bay.

17 Q. So if we were to cost out page 19 to
18 year 40 or year 60, what figures should we be looking
19 at over that time span?

20 A. I can't speak to all of the economic
21 information, but again, as you go further out in time,
22 changes from year to year aren't substantial. You may
23 find it inappropriate to be spending a significant
24 amount of money on an annual basis. It may be spread
25 over five or ten years at that point.

1 I think also, I would hope someone else
2 on the panel could speak to the net present value of
3 expenditures of that kind that far in the future.

4 MS. BASU ROY: A. Maybe I can add
5 something here.

6 First of all, the values that you are
7 seeing here on page 19 are of a generic nature that we
8 would put in more specific values for individual sites,
9 where we might have specific monitoring needs
10 identified. So it could be something significantly
11 different than what you're seeing, this is
12 illustrative.

13 As the numbers get further out into the
14 future through present valuing, the costs, the value
15 later on would be reduced significantly in the cost
16 benefit analysis.

17 Q. All right, so you've already answered
18 a question I was about to ask. You're in fact not
19 assuming the same monitoring cost for each site.

20 A. That's correct. Well, for some of
21 the sites we have more specific information, and we
22 would have numbers that differ from what you're seeing
23 here, because we're further along with studies.

24 Q. Ms. Basu Roy, perhaps I could
25 continue with you. What categories of natural

1 environment measures were assumed to be included in
2 this -- well, let's just look at extensions. I guess
3 it would be \$650,000 over that 20 year period for one
4 site.

5 What sorts of natural environmental
6 effects were you including when you came up with that
7 cost, even if it is a generic cost?

8 A. Just generally, the last sentence
9 there under that section A, it says:

10 The costs are for programs to verify
11 predictions made in the environmental
12 assessment to appraise the effectiveness
13 of mitigation measures and to identify
14 the need for further actions to protect
15 the environment and resource users.

16 I think if you're looking for something
17 more specific than that, Mr. McCormick might be able to
18 add something?

19 MR. MCCORMICK: A. All of the monitoring
20 studies are a product of the site specific
21 environmental assessment process. At this point, when
22 we are only working with a general sense of what a
23 baseline study costs us when we first undertake
24 environmental assessment, and that's the order of
25 magnitudes of funds that would be put aside for the

1 post operational phase.

2 There is no breakdown at this point,
3 because every project will have its own specific
4 concerns, components of the environment that should be
5 monitored.

6 Q. What kind of range of error are we
7 talking about? And you've given us just one figure.
8 Let's say, \$100,000 per year for years one to five.
9 What's the range that you might be considering as being
10 the appropriate range to consider with respect to this
11 issue, as opposed to an average?

12 A. I can't speak to that. I wasn't
13 involved in the determination of these numbers. I'd
14 have to check.

15 Q. I'm sorry, who was?

16 MS. BASU ROY: A. I think the numbers
17 that you see on page 19 are representative of the
18 numbers that we feel are appropriate to put in at this
19 stage of planning. That's about as much information we
20 have but as we get closer into site specific studies,
21 we'll have a better feeling for what the actual numbers
22 should be.

23 Q. Mr. Flook, did you want to add
24 something?

25 MR. FLOOK: A. I'll add to that. I gave

1 June numbers to use there.

2 Q. I'm sorry?

3 A. I said I gave Ms. Basu Roy numbers to
4 be put in to use.

5 Q. Do you have a sense of what the range
6 should be as opposed to a single number?

7 A. Plus or minus 10, 15 per cent.

8 Q. All right, thank you.

9 And, Mr. Flook, if you're the appropriate
10 person to ask, the costs are, just focusing now on new
11 sites for a moment, it's \$200,000 a year for each year
12 in the first five years, and thereafter you only
13 monitor every five years. What's the rationale for
14 only monitoring every five years after year five?

15 MR. MCCORMICK: A. The rationale for
16 decreasing amount of monitoring is the expectation that
17 certain components of the environment will begin to
18 reach some form of steady state or equilibrium, such
19 that you can't measure year to year changes. And as
20 you start finding no change from one year to the next,
21 you usually would expect to delete that from your
22 monitoring program.

23 Q. This heading is called "Costs of
24 Natural Environment Effects Monitoring." Is it meant
25 nonetheless to include the cost of social, economic,

1 cultural impacts effect monitoring?

2 [3:20 p.m.]

3 MR. FLOOK: A. That would have been
4 assumed in those numbers.

5 Q. I am sorry, you said that was assumed
6 in those numbers?

7 A. Yes.

8 Q. Mr. Flook, can you advise the Board
9 whether Ontario Hydro has any experience in monitoring
10 the social and environmental effects related to
11 hydraulic facilities?

12 A. I believe any advice given within
13 Ontario Hydro is not necessarily associated with
14 hydraulic. Ontario Hydro has undertaken other capital
15 projects.

16 Q. So you are assuming that regardless
17 of supply option, the social effects monitoring would
18 be the same?

19 A. It may not be the same but certainly
20 you have a certain gist of the types of things that
21 have to be done and what it takes to -- a lot of your
22 costs are getting a person into the field has nothing
23 to do with exactly what they are doing, and certainly
24 you get some sense of proportionate costs out of that.

25 Q. Can I refer to you page 209 of the

1 Volume 2 binder. This is interrogatory 6.26.219.

2 THE REGISTRAR: 367.81. Mr. Chairman.

3 THE CHAIRMAN: Thank you.

4 ---EXHIBIT NO. 367.81: Interrogatory No. 6.26.219.

5 MR. CASTRILLI: Q. The first part of the
6 answer says that Hydro has not undertaken studies to
7 examine habitat that has been created or enhanced as
8 the result of hydroelectric development. The answer
9 goes on and also refers to three studies all in
10 relation to the Little Jackfish EA and they are noted
11 as having been previously forwarded to the Coalition.

12 We, for whatever reasons, don't have any
13 of those three studies and I am wondering if I could
14 have an undertaking that they would in fact be
15 provided.

16 THE CHAIRMAN: Those three studies have
17 not been filed; is that right?

18 MR. CASTRILLI: I believe they are not
19 exhibits.

20 MR. SNELSON: They may be attached to
21 interrogatories.

22 MR. MCCORMICK: The third one is attached
23 to Interrogatory 6.10.32. We will have to do a little
24 bit of research on the other ones.

25 THE CHAIRMAN: But it does say in the

1 answer that these reports have been previously
2 forwarded to your client.

3 MR. CASTRILLI: We have made a check of
4 our files and for whatever reasons we don't have appear
5 to have them at any of our various offices.

6 MR. McCORMICK: Very early in the process
7 the Coalition asked for every reference document in the
8 Mattagami EA and Little Jackfish EA, and it is my
9 understanding that the full set of references were
10 provided and that was the basis for that comment.

11 MR. CASTRILLI: I am not disputing
12 whether it has been sent or not. I am simply advising
13 you that we, for whatever reasons, do not have them and
14 we would appreciate having them.

15 THE REGISTRAR: Mr. Chairman, do you
16 require a number for 6.10.32?

17 THE CHAIRMAN: Yes.

18 THE REGISTRAR: That will be 367.82.

19 ---EXHIBIT NO. 367.82: Interrogatory No. 6.10.32.

20 THE CHAIRMAN: So we only need first two
21 then; is that right?

22 MR. CASTRILLI: Yes, that appears to be
23 the case.

24 THE CHAIRMAN: We better put an
25 undertaking number on that then.

1 THE REGISTRAR: 366.8.

2 THE CHAIRMAN: Thank you.

3 ---UNDERTAKING NO. 366.8: Ontario Hydro undertakes to
4 provide study (1) and study (2) as listed
in Interrogatory No. 6.26.219.

5 MR. CASTRILLI: The next reference is to
6 page 210, which is interrogatory 6.26.241A.

7 THE REGISTRAR: 367.83.

8 ---EXHIBIT NO. 367.83: Interrogatory No. 6.26.241A.

9 MR. CASTRILLI: Q. Mr. McCormick, in
10 this one we asked you about the effectiveness of
11 pickerel spawning protective measures with respect to
12 existing hydraulic facilities. I believe the sum and
13 substance of your answer is that the results, or any
14 results were not monitored and since 1988 the limit no
15 longer applies, at least in relation to the Abitibi
16 Canyon.

17 What does Ontario Hydro know about the
18 effectiveness of this mitigation measure?

19 MR. MCCORMICK: A. I am not aware that
20 there was any preoperational study, if you will. In
21 other words, what the level of spawning activity was
22 prior to its implementation such that there was no real
23 point of reference to compare with.

24 Q. So the answer is you don't know?

25 A. My answer is I am not aware that any

1 study could be done.

2 Q. The next is page 211 of the binder,
3 that's Interrogatory 6.26.350.

4 THE REGISTRAR: 367.84.

5 ---EXHIBIT NO. 367.84: Interrogatory No. 6.26.350.

6 MR. CASTRILLI: Q. In this interrogatory
7 we asked you about mitigation measures for the
8 protection of fisheries and insects and food organisms,
9 and in particular about the effectiveness of these
10 mitigation measures. I take it the gist of your answer
11 in this interrogatory, Mr. McCormick, is that Hydro has
12 not undertaken studies to examine the effectiveness of
13 these measures although they were, I gather,
14 implemented in conjunction with the Ministry of Natural
15 Resources.

16 Is that a fair summary of the
17 interrogatory?

18 MR. McCORMICK: A. The response
19 indicates that the interrogatories and the tables, the
20 table in the environmental analysis, C6, that we have
21 extensive discussion on today, provides a list of
22 examples gained from experience. As I have indicated
23 it is not even a comprehensive summary of the
24 mitigation alternatives that are available.

25 We are aware of a lot of work that's

1 being done in the United States right now, major
2 studies looking at mitigation measures applied at many
3 hundreds of generating stations that really demonstrate
4 the level of implementation and success of these
5 facilities, and we will be making use of those studies
6 for future environmental assessments.

7 MR. CASTRILLI: Mr. Chairman, I think I
8 also meant to make page 212 an exhibit, which was
9 Interrogatory 6.26.360A.

10 THE CHAIRMAN: That will be 85.

11 THE REGISTRAR: That's 85, yes, sir.

12 ---EXHIBIT NO. 367.85: Interrogatory No. 6.26.360A.

13 MR. CASTRILLI: Q. Mr. McCormick,
14 actually I think I was actually already speaking to
15 this interrogatory before it was made an exhibit.

16 Do I take it that Hydro does not know
17 what the effectiveness of this type of measure is?

18 MR. MCCORMICK: A. I think these
19 measures are, as I understand it, and I am not a
20 biologist, but our biologists tell me are based on
21 sound principles, applications that have been used
22 elsewhere, and they are commonly applied at
23 hydroelectric facilities.

24 The extent to which they will be
25 successful will depend on not only that prior

1 information but examination of site-specific conditions
2 that will be done in consultation with government
3 agencies who have their own expertise in these areas,
4 and I think sensible judgments will be reached as a
5 result of the environmental assessment process.

6 Q. I will refer to you page 214 this is
7 on Interrogatory 2.26.19.

8 THE REGISTRAR: 367.86.

9 ---EXHIBIT NO. 367.86: Interrogatory No. 2.26.19.

10 MR. CASTRILLI: Q. In this interrogatory
11 we asked you to provide us with studies relating to
12 Aboriginal and treaty rights in the development of
13 existing hydraulic facilities, and your answer was
14 that Ontario Hydro has not undertaken any such studies
15 with respect to existing hydroelectric facilities.

16 Can we take it that treaty and Aboriginal
17 rights were not addressed in relation to existing
18 hydraulic facilities, Ms. Quinn?

19 MS. QUINN: A. Mr. Castrilli, help me a
20 little with your question. Were not addressed...
21 site-specific studies in the environmental assessment?
22 Can you help me, what are you thinking?

23 Q. Well, I have haven't limited it to
24 the DSP.

25 I have asked whether Aboriginal and

1 treaty rights have been considered in regard to
2 existing hydroelectric facilities?

3 A. Yes. I think your interrogatory
4 refers specifically to studies. The interrogatory is
5 correct, the response is correct, studies have not been
6 taken but consideration is given to Aboriginal and
7 treaty rights.

8 Q. When, before the project was entered
9 into, after the project was built?

10 A. I think since Aboriginal rights are
11 being defined now, and I am not a lawyer, but I think
12 of them as being somewhat similar to inherent rights,
13 and I may be wrong in that regard. I believe we are
14 all learning what is meant by those.

15 So I would say that this is a
16 consideration that carries on throughout the lifetime
17 of a facility. And as we know, First Nations have been
18 recently become officially recognized by this
19 government, provincial government, as governments, and
20 that's something that influences us and our
21 site-specific work and would have in the plan
22 assessment work as well to do with the basin.

23 Q. Could I refer you, Ms. Quinn, to
24 Volume 82 of the transcript. We are looking at page
25 14645. Actually, really it's from page 14645, line 25,

1 to 14648, line 3, that's the context for the question.
2 I am only particularly interested in the first three
3 lines of page 14648.

4 As I say, you might want to read the
5 entire answer to get the context. It's an answer you
6 gave to a question during the examination in chief.
7 The statement is that a check was made to see if any
8 defined reserve lands would be impinged on. And to the
9 best of our knowledge the answer is no.

10 First of all, I want to know what you
11 meant by "impinged on"?

12 A. Well, we had a look at the mapped or
13 defined boundaries associated with reserves, and I am
14 distinguishing there between homelands and traditional
15 lands and specific area that's labeled as reserve, and
16 what we really meant was in a physical sense would
17 there be anything like flooding that would go on to
18 reserve land.

19 Q. So the focus was on flooding?

20 A. Well, the focus was on a specific
21 change that might occur to the area that is reserve
22 land in terms of land use being changed, and I think
23 flooding is a good example because it's quite dramatic.

24 Q. What about traditional areas beyond
25 defined reserve lands, will they be impinged upon?

1 A. I don't know. I think that would be
2 something that would be studied at a site-specific
3 stage.

4 Q. And I understand that would be
5 consistent with Exhibit 235, that's your guidelines for
6 Aboriginal relations. You might want to refer to that.

7 A. Yes, I don't have that handy,
8 unfortunately. Are you going to speak to it
9 specifically?

10 Q. Well, perhaps you might want to have
11 it in hand. It was one of the documents -- I think it
12 was identified as a Hydro exhibit to be relied upon in
13 this panel, so you probably have it nearby somewhere.

14 A. I have them.

15 Q. Okay. And I think we are looking at,
16 if we are to number this first page, it would be bullet
17 4. It says:

18 When assessing and managing the social
19 and environmental effects of projects,
20 Ontario Hydro will consider effects not
21 only on Aboriginal communities themselves
22 but also on the extensive areas they rely
23 on for resource harvesting, cultural and
24 spiritual activities.

25 [3:43 p.m.]

1 Now at page 14648, you say you engaged in
2 an examination to determine if reserve lands would be
3 impinged upon, and you concluded they wouldn't. But
4 you say you're not going to consider the issue of
5 traditional land use areas, except at the site specific
6 stage, is that right?

7 A. I don't believe I said that, Mr.
8 Castrilli. The second part of what you've just
9 mentioned is not correct.

10 Q. Well, have you already then examined
11 whether traditional land areas will be impinged upon?

12 A. Within the plan, within the
13 attainable potential? Is that what you are asking?

14 Q. Well, let's keep it within the
15 confines of the answer you were giving in Volume 82.

16 A. In Volume 82 I was speaking to
17 exclusion criteria specifically to do with attainable
18 potential Aboriginal.

19 Q. Fine, let's deal with it in relation
20 to obtainable potential.

21 A. It didn't qualify. We don't know
22 what the effects are going to be, because obtainable
23 potential is not site specific, so we really don't know
24 the extent or the nature of change that might occur in
25 the home lands or the traditional lands, and we don't

1 always know where those lands are.

2 We don't know what the patterns are, we
3 don't know where the boundaries exactly begin and end.
4 We would hope to learn that through site specific work.
5 I think through the corporate Aboriginal relations
6 guidelines, you can feel assured we will have a
7 sensitivity for it, but we could not speak to it as an
8 exclusion criteria for the purposes of defining
9 obtainable potential.

10 MR. CASTRILLI: Mr. Chairman, save and
11 except one matter, I think I'm done.

12 I believe before the lunch break you had
13 asked about Exhibit 374, and --

14 THE CHAIRMAN: The foundation for that
15 table 3.2.

16 MR. CASTRILLI: All right. Firstly, if
17 you have the entire document before you, the document
18 is authored by R.J. Walters, group manager of design
19 and development, or at least that's what he was at the
20 time of this document.

21 My understanding, and perhaps any one
22 member of the panel can confirm that Mr. Walters is now
23 vice-president for thermal operations.

24 And then if you look at the table of
25 contents, which I guess we've actually numbered or were

1 numbered as Roman Numerals, so that we would be looking
2 at Roman Numeral 5, you would see that on page Roman
3 Numeral 5, appendix C is the heading "Typical
4 Environmental Concerns and Mitigation Hydraulic
5 Generation," and as part of appendix C is the table C-2
6 that I have been referring to before the break.

7 THE CHAIRMAN: But I wondered if 3.2 was
8 referred to in the main text. That was my question,
9 because a typical...

10 MR. CASTRILLI: Oh.

11 THE CHAIRMAN: It's usual in a work such
12 as this, maybe it isn't in this one, I don't know, but
13 it's usual in the course of the main work, that they
14 refer to the appendix and then identify the appendix
15 and its source, and they then identify the tables that
16 they are using, so that there is some relationship,
17 foundation for the table.

18 MR. CASTRILLI: Yes, I think -- yes,
19 there are a couple of places to look in that regard,
20 Mr. Chairman.

21 Firstly, I think you would want to look
22 to page 91, where appendix C is first identified.
23 That's under that heading "Typical Environmental
24 Concerns and Mitigation."

25 You'll have to bear with me for a moment,

1 because the pagination doesn't remain consecutive.

2 The actual appendix C begins at page 130
3 or also known as page A-18. And then on page 131 there
4 is text referring to, I guess it's introduction to the
5 tables, and down at the bottom of page 131 is a
6 reference to table C-2. So it appears to all be part
7 of the same document.

8 THE CHAIRMAN: So C-2 then does relate to
9 flooding of a very large area to create a reservoir.

10 MR. CASTRILLI: Yes, it's in relation to
11 flooding.

12 THE CHAIRMAN: And I guess that's one
13 aspect that wasn't clear to me, because all it says,
14 when you look at C-2, is potential effects of Hydro
15 development on other uses, and it really seems to be
16 the flooding of a very large area to create a reservoir
17 that is the foundation of that table.

18 MR. CASTRILLI: Yes. There doesn't
19 appear on the face of the document to be a definition
20 of what is meant by a very large area, but I think
21 that's the context of table C-2.

22 THE CHAIRMAN: All right, thank you.

23 Can I ask any of the witnesses to just
24 confirm that Mr. Walters is now in fact vice-president
25 for thermal operations at Ontario Hydro?

1 MR. WIGLE: That is correct.

2 MR. CASTRILLI: Mr. Chairman, I think
3 subject to the undertakings, those are my questions.

4 THE CHAIRMAN: Thank you, Mr. Castrilli.
5 Who is next? We are going to take a
6 break, but...

7 MR. NUNN: I think Mr. Thompson is ready.

8 THE CHAIRMAN: Mr. Thompson, are you
9 ready to go after the break?

10 MR. THOMPSON: Ready as I ever will be,
11 Mr. Chairman.

12 THE CHAIRMAN: Dr. Connell has some
13 questions to ask arising out of your cross-examination,
14 either take the break...

15 MR. CASTRILLI: I'll come back after the
16 break.

17 THE CHAIRMAN: All right.

18 THE REGISTRAR: This hearing will recess
19 for 15 minutes.

20 ---Recess at 3:50 p.m.

21 ---On resuming at 4:09 p.m.

22 THE REGISTRAR: Please come to order.
23 The hearing is in session. Please be seated.

24 THE CHAIRMAN: Dr. Connell has a question
25 or questions.

1 DR. CONNELL: Two.

2 like to refer to Volume 86, which was
3 yesterday, and the page reference is 15276. This
4 concerns the matter of employment. And Mr. Flook
5 testified with respect to hydraulic construction
6 projects, that these would be in the hands of a general
7 contractor.

8 I wonder then if someone on the panel
9 could explain to me how we are to read the sections of
10 the DSP and the environmental assessment which deal
11 with the matters of local hiring and training and
12 apprenticeship that we've been discussing in the text.
13 In fact, let me cite one reference.

14 Exhibit 4, page 6-11, the summary. Right
15 at the bottom of the page, this is in the context of
16 northern hydraulic developments, reading from the
17 second last sentence on that page:

18 Facilitating local hiring may require
19 joint initiatives involving Hydro, the
20 trade unions and governments. These
21 could include training and apprenticeship
22 programs and special arrangements for
23 union qualification and hiring.

24 I had originally assumed, and I think the
25 earlier part of the examination seemed to assume that

1 these matters were all Hydro's responsibility, but
2 there is no reference in the text that I've just quoted
3 to involving the general contractor.

4 Is it in fact the general contractor that
5 would be doing the hiring and training and
6 apprenticeship? And if so, is it possible for Hydro to
7 influence the behaviour of the general contractor?

8 MR. FLOOK: Whether the construction job
9 is undertaken by Ontario Hydro directly as a general
10 contract or or a separate general contractor, the staff
11 to actually do the work are hired in the same manner;
12 through the electrical, the Allied Council of Trade
13 Unions, and they are all hired on.

14 So the same person would come onto the
15 site no matter who was constructing the site, whether
16 it is Ontario Hydro or a general contractor. So
17 therefore construction trade unions are carrying out
18 the physical work.

19 In achieving some of these desired
20 results, Ontario Hydro has a number of options, whether
21 they are doing it themselves or the general contractor,
22 in that as terms and conditions of the general contract
23 requiring certain hiring practices. The other is
24 apprenticeship programs are run by the individual trade
25 unions, but the general contractor, in either case the

1 general contractor or Ontario Hydro as the general
2 contractor, can stipulate the number of apprentices on
3 the site, and that can be restrictive. Therefore
4 Ontario Hydro, in its general contracts, can set
5 numbers to achieve the required or desired results of
6 additional apprentices from the area.

7 For an example, even within hiring a
8 consulting engineering firm, our intent to hire a
9 consulting engineering firm to do some northern work,
10 one of the evaluation criteria was what they proposed
11 to do to involve Aboriginal people in engineering
12 technical work, and that was an evaluation factor.
13 Same thing for general contracts. You can put in
14 factors that say that is part of the criteria for
15 evaluating the acceptability of your contract.

16 DR. CONNELL: Thank you. I think that
17 helps me to understand it. But I take from your
18 response that one should probably read into the
19 language that I've just cited some reference to
20 contractors where applicable, because they would
21 certainly be parties to this understanding.

22 MR. FLOOK: They would be parties, but it
23 would be Ontario Hydro who makes the commitment to do
24 certain things, and they would, in turn, if there was a
25 cost component to doing this, would then see that in

1 the contractor's bid reflected back to what Ontario
2 Hydro would have to pay for it.

3 DR. CONNELL: Yes, thank you, Mr. Flook.

4 My other question concerns the Manitoba
5 evidence, or perhaps I should say the Manitoba
6 documents, which Mr. Castrilli brought to our
7 attention, and particularly South Indian Lake.

8 I don't think the panel really had an
9 opportunity to say whether they thought that the types
10 of physical and biological and social impact observed
11 at South Indian Lake were likely to be encountered in
12 Ontario Hydro projects. Perhaps you could speak by
13 reference to the impact studies which you've already
14 completed or have partly completed.

15 Do you see much relevance of the South
16 Indian Lake experience to Ontario?

17 MS. QUINN: I've had some trouble finding
18 out how much land was flooded as a result of South
19 Indian Lake, and I had understood that it was extensive
20 flooding. But I'm not entirely sure of the hectares or
21 the acreage or the square miles involved.

22 I think in two ways we've tried to deal
23 with this notion of flooding. One is explicitly
24 through the northern rivers exclusion criteria, and the
25 other is through the exclusion criteria that has to do

1 with the desire to reach an agreement for co-planning
2 in the Moose River Basin before proceeding.

3 We understand that if sites are developed
4 within the Moose River Basin, there may be some
5 flooding, but much of that depends on what is discussed
6 and agreed to in that co-planning agreement. And as
7 you know, there are no megawatts associated with
8 anything in the Basin at this point in time.

9 So I didn't see extensive relevance to
10 the South Indian Lake situation, given that the nature
11 or, excuse me, the extent of the flooding is likely to
12 be quite different.

13 But I do think that the document is
14 helpful in a sense that it does flag some issues that
15 one wants to track, to pay attention to, and certainly
16 if the opportunity is provided to enter into studies
17 jointly, you'd want to make sure there is some
18 opportunity that these topics are discussed. And if
19 the local people want the topics included, I think it
20 would be helpful from a professional point of view to
21 have them addressed, but you'd also think that the
22 local Aboriginal communities would as well.

23 So some of those topics that I think are
24 useful have to do with the way in which the land uses
25 could change and the local economy associated with

1 those land uses, whether or not it's the direct or the
2 indirect economy, their employment associated with the
3 uses of land, the extent to which the subsistence uses
4 are affected; hunting, fishing, trapping, berry
5 picking.

6 I think it is important that there be
7 some understanding of monitoring and some commitment to
8 do with impact management that is established in
9 understanding what might be -- in the co-planning
10 activities or the outline or terms of reference
11 associated with co-planning activities.

12 So I find it helpful, but I can't make a
13 direct application in terms of the extent and the
14 nature of the impacts.

15 MR. MCCORMICK: I'm a little more rusty
16 right now on the South Indian Lake experience. We
17 certainly looked at it a few years ago, and it has
18 provided a lot of valuable information in the area of
19 mercury cycling, and Mr. Harris will talk to that.

20 In general terms, projects like that one
21 do assist you with identification of issues on a
22 project specific level, and as I tried to indicate,
23 when you have a project and you know the various
24 characteristics of that project, then you can attempt
25 relate it to other projects. For example the type of

1 facility, whether water level fluctuations were an
2 issue or whether protection of a given fish species was
3 an issue, whether mercury was an issue, and if so why.
4 You can start understanding and have some basis of
5 comparison on a project specific level.

6 So as far as planning exercises go, it
7 doesn't provide very much useful information in that
8 sense beyond the broad types of effects that we've
9 discussed in documentation and I presented in my direct
10 evidence.

11 I think mercury is the big area where it
12 has been helpful, and Mr. Harris can talk to you about
13 that.

14 MR. HARRIS: I would say for the issue of
15 mercury, that the Southern Indian Lake experience was a
16 very valuable one, and it was one of the first projects
17 which identified the issue of mercury in reservoirs,
18 and it also had some data, both before and after
19 flooding, which is missing in many other projects. And
20 there was also a fairly extensive body of work carried
21 out looking at some of the processes involved and there
22 was a fair amount of research carried out for the
23 Southern Indian Lake experience regarding mercury.

24 In terms of its applicability to the
25 Ontario situation, I think it serves to highlight some

1 of the issues which hadn't been identified previously
2 in a general sense, just the mercury issue in fish, and
3 the fact that concentrations in fish can go up as a
4 result of hydroelectric projects and the fact that
5 there for example were fish mercury measurements in
6 different species identified different trends in
7 different species at different levels in the food
8 chain.

9 So these kinds of issues and trends were
10 very valuable to see coming out of Manitoba.

11 [4:25 p.m.]

12 I think it is important in that context
13 that both the issues were identified and the trends,
14 some of the trends with time or with certain physical
15 features were identified. But I would say also I think
16 that there are a number of site-specific features that
17 need to be accounted for in each case, and that I
18 wouldn't apply the Southern Indian Lake experience for
19 mercury universally to all reservoirs. I think you
20 have to try and understand what happened in Southern
21 Indian Lake and then apply those results to your own
22 projects. So, perhaps that is of some assistance to
23 you.

24 DR. CONNELL: Let me ask you, if you were
25 looking at a project in Ontario for which you could

1 predict outcomes which were essentially the same as
2 those at South Indian Lake and if you came to the
3 conclusion they could not be mitigated, would you
4 recommend against proceeding, or would you expect the
5 project to fail at a site-specific hearing?

6 MR. HARRIS: If the fish mercury
7 concentrations that were observed at South Indian Lake
8 were also predicted to occur in Ontario despite the
9 mitigative measures that you might think you could
10 pursue in terms of minimizing the increase in mercury
11 in fish, I think you would still need to pursue the
12 potential for mitigation in terms of human uptake, who
13 eat the fish in your particular location in Ontario,
14 what are the options for alternatives in terms of
15 different species, different locations, what is the
16 extent of flooding -- I am sorry, that wouldn't relate
17 to the uptake of fish from people. But I think that
18 you would have to explore that side of it as well.

19 DR. CONNELL: I am not really referring
20 just to the mercury; I am referring to the whole
21 overview including the human dislocations.

22 MR. MCCORMICK: I think it is fair to say
23 that if we found projects with significant effects that
24 we could not adequately mitigate to the agreement of
25 ourselves, government agencies, and the affected

1 people, we would not proceed with the undertaking.

2 DR. CONNELL: Thank you.

3 MR. FLOOK: If I may just add on an
4 overall project point of view. In Manitoba, of course,
5 the information on South Indian Lake and the Grand
6 Rapids site that is the subject of many of the papers
7 here are only a few of the hydroelectric projects
8 carried out in northern Manitoba, and certainly you
9 would have to look at the experience of those other
10 sites that are perhaps closer to what is being
11 proposed, some of the ones directly on the Nelson
12 River, closer to being what is actually perhaps
13 proposed in the Moose River Basin, and the experience
14 from those sites may contribute to the knowledge of the
15 understanding of the activities and the results of the
16 activities.

17 DR. CONNELL: Thank you.

18 THE CHAIRMAN: Do you have any further
19 questions, Mr. Castrilli?

20 MR. CASTRILLI: No, Mr. Chairman.

21 THE CHAIRMAN: Thank you.

22 Now, Ms. Kleer, I learned from Ms.
23 Morrison at the break that you are proposing to ask
24 further questions; is that right, for NAN Treaty 3?

25 MS. KLEER: We may have a few in relation

1 to redevelopment but certainly nothing that I would
2 have covered here.

3 THE CHAIRMAN: Well, I think you ought to
4 do that in conjunction with this examination. I don't
5 think the same counsel ought to be appearing at
6 different times on cross-examination. I don't think
7 that should happen.

8 I would assume that the interests of NAN
9 Treaty 3 and the Moose River James Bay Coalition are
10 congruent otherwise they would have separate
11 representation.

12 MS. KLEER: Well, I agree with that, Mr.
13 Chairman, that there is certain congruencies, but the
14 issues that I wanted to deal with are specifically in
15 relation to a matter that I haven't dealt with here,
16 and to be honest, I haven't prepared that portion yet.
17 I know about where I am going to go but it's certainly
18 nothing I have got prepared at this point yet. And I
19 can assure you that I don't intend to go back at all to
20 anything I have dealt with here. It's a specific
21 matter that I am concerned with.

22 THE CHAIRMAN: Well, it's in the context
23 of the generic hydraulic plan, I assume.

24 MS. KLEER: It's in relation to what is a
25 redevelopment and extension and how you characterize

1 that. And it is clearly we are concerned about Ragged
2 Chute and we want to see why it is that ragged Chute
3 has been characterized as redevelopment and extension.
4 That is extent of my questions.

5 But as I say, I haven't prepared those
6 questions yet and I don't feel that I could do that at
7 this point.

8 THE CHAIRMAN: Well, would you be able to
9 do it first thing tomorrow morning?

10 MS. KLEER: To be honest, no, Mr.
11 Chairman. I do have some other things that I have to
12 do. If I could have the next few days, it's only going
13 to be half an hour to an hour of cross at the most. I
14 am happy to come back next week Monday to do it.

15 THE CHAIRMAN: Could you just tell me
16 what it is, what the subject matter in a general way is
17 that you are proposing to cover?

18 MS. KLEER: Redevelopment and extensions
19 and how Ragged Chute has been characterized as a
20 redevelopment and extension.

21 THE CHAIRMAN: How does that, in your
22 submission, fit into the assessment of the hydraulic
23 plan?

24 MS. KLEER: They have made a lot of
25 statements in relation to differences between

1 redevelopments and extensions and new developments in
2 terms of impact. And if something is characterized as
3 a redevelopment and extension, then the submissions --
4 or rather, the evidence that they have given in
5 relation to environmental impact of redevelopments and
6 extensions shouldn't apply to a site that may in fact
7 not be characterized, although they have called it
8 redevelopment and extension, doesn't in fact constitute
9 a redevelopment and extension as we understand those
10 terms to mean.

11 THE CHAIRMAN: But Ragged Chute, it's not
12 even included in the range, is it, of the plan?

13 MS. KLEER: Yes, it is.

14 THE CHAIRMAN: Is it? I have forgotten.
15 Is it?

16 DR. CONNELL: It's not excluded.

17 THE CHAIRMAN: It's not excluded, all
18 right.

19 But as I recall, my memory is that you
20 spent a considerable length of time on behalf of Moose
21 River James Bay talking about this very issue that you
22 have just described. If it's all going to be just
23 which pocket does Ragged Chute fall into, I am not sure
24 that's something we ought to be concerned with.

25 MS. KLEER: Well, Mr. Chairman, with

1 respect, I certainly didn't deal with whether Ragged
2 Chute is a redevelopment and extension or not. That's
3 an issue that I haven't touched on.

4 THE CHAIRMAN: That's not something we
5 should even be caring about.

6 MS. KLEER: I submit that I think you
7 might want to care about it because if one of the
8 reasons for preferring new -- or redevelopments and
9 extensions to new developments relates to environmental
10 impacts, which is I believe the evidence that was given
11 by the Hydro witnesses, then if you characterized or
12 mischaracterized a site as a redevelopment and
13 extension as compared to a new development then you are
14 going to have different impacts.

15 THE CHAIRMAN: We are going around in
16 circles. The preference for redevelopment or regulated
17 river, or whatever you want to call it, over a new site
18 was explored thoroughly in your examination. Now, I
19 don't know what more you can add to that than you
20 already did.

21 I am not going to put you on the spot
22 now, but I am not going to let go of this issue, so you
23 are going to have to justify to me before you commence
24 your cross-examination that you really have something
25 that is different.

1 And from now on you should do all your
2 cross-examinations in one package. They shouldn't be
3 separated the way it's been done here.

4 MS. KLEER: That is fine. We will take
5 that for Panel 7.

6 THE CHAIRMAN: I won't put you under the
7 gun right now, but before you do your examination we
8 are going to have to revisit this particular subject.

9 MS. KLEER: That is fine, Mr. Chairman.

10 THE CHAIRMAN: Now then, Mr. Thompson.

11 MS. HARVIE: I'm sorry, over the break
12 Ms. Quinn has provided me with a copy of 6.26.66C that
13 was referred to in her cross-examination this
14 afternoon, and I believe it is Exhibit 367.73, and I
15 have got copies here. Thank you.

16 CROSS-EXAMINATION BY MR. THOMPSON:

17 Q. Good afternoon, panel. I am Stephen
18 Thompson and I represent the Ontario Federation of
19 Agriculture.

20 My questions, I hope to be very brief and
21 deal pretty well exclusively only with one area, the
22 area of pumped storage.

23 I have asked you to look at Exhibit 57
24 and refer specifically to table S1, which is the fourth
25 page in.

1 MR. SNELSON: A. I know what Exhibit 57
2 is but I don't have a copy.

3 Q. It's the Demand/Supply option study.

4 A. Yes.

5 Q. From February 1986.

6 MS. PATTERSON: Figure S1?

7 MR. THOMPSON: Yes, that's correct.

8 Q. We may run a little short on copies.
9 I have the hearing room copy here with me and if you
10 need to have it, I can give it to you.

11 THE CHAIRMAN: Mr. Thompson, is it table
12 S1 or figure S1?

13 MR. THOMPSON: It says table S1 and it is
14 the fourth page in from the front. It's titled
15 "Options to be Retained for Further Study."

16 Q. Just before we get the copy here,
17 perhaps I could just outline what I am looking at.
18 This table outlines the standard costs of various
19 options in 1984 dollars per megawatt.H, which I assume
20 is megawatthours. Nuclear ranges from 32 to 50; coal
21 ranges from 43 to 58; demand/side options range from 24
22 to 48, approximately, and the energy storage
23 technologies, aboveground and underground pump storage,
24 range from 48 to 59.

25 In particular, again at the risk - and I

1 hope I am not straying too far into site-specific but
2 rather use it to illustrate the whole range of things -
3 the Jordan-Erie pumped storage, which was mentioned
4 earlier, could go down to approximately 48, to place
5 it, in Hydro's words, which would be sufficient to
6 place it among the most economically preferred options.

7 My question from that is, would it
8 appear - and it may have already been answered and I
9 have difficulty finding it in the transcript - but cost
10 alone would not appear to be sufficient reason to not
11 pursue this option further. I understand the answer
12 had something to do with it's empty megawatts or load
13 shifting and so on; is that correct?

14 MR. SNELSON: A. That is correct.

15 Q. Now, Exhibit 57 again on page C3,
16 which is a part of the appendix to it, indicated
17 that -- in particular, again I am assuming that this
18 particular project would be a general proxy for this
19 type of project. The last time this was studied would
20 have been in 1975, is this approximately correct?

21 A. The last time what would have been
22 studied?

23 Q. It said the Jordan-Erie scheme
24 between Lake Ontario and Lake Erie. This is the only
25 date that's on any of the three main pumped storage

1 things, so I am assuming that the last time that this
2 pumped storage option was visited seriously would have
3 been in 1975; is that correct, or has it been looked at
4 more recently?

5 A. I believe that studies of underground
6 pumped storage are more recent.

7 Q. But the aboveground pumped storage,
8 1975 would be the date that would be applicable; is
9 that correct?

10 A. I don't know of studies that are more
11 recent than that.

12 Q. All right. I guess my next question
13 will be relatively academic but I will ask it anyway.
14 Have any studies been done since then to evaluate the
15 acceptance or opposition by farmers or farm groups as a
16 means of determining whether this and similar pumped
17 storage proposals in general might be more acceptable
18 now in the Demand/Supply Plan?

19 I refer to the comment being that this
20 particular area, and I assume other areas, that may be,
21 it says, fairly-intensively farmed.

22 I guess the basis for my question or the
23 proposition being that since 1975 farmers' opposition
24 may have changed somewhat because they might view this
25 storage reservoir as a means of providing irrigation,

1 and so on. But I would take it that no studies of any
2 sort have been done since 1975, including any studies
3 which might evaluate except increasing -- or increasing
4 acceptance of or increasing opposition to this type of
5 project?

6 A. Is this general to aboveground pumped
7 storage or specific to Jordan-Erie?

8 Q. That's correct, aboveground storage
9 in general.

10 A. I don't know of any studies that have
11 been done on acceptance of such facilities by farmers
12 in recent years.

13 Q. Okay. Now, I note in various sources
14 that the power dam reservoirs, part of the uses of
15 these reservoirs include source of water supplies for
16 municipalities. I believe that was given in evidence
17 in chief by someone under the category of Other Uses,
18 part of the reason for having these reservoirs was to
19 provide a constant water supply, and so on. Is that
20 generally correct?

21 MR. WIGLE: A. That is correct, yes.

22 Q. Was this potential usage for
23 municipalities adjacent to pumped storage reservoirs
24 ever considered as a means of reducing the cost of
25 reservoirs?

1 Again, at the risk of being site
2 specific, just as a hypothetical, the Delphi point
3 thing adjacent to the Town of Collingwood might provide
4 a source of water for the Town of Collingwood if water
5 could be sold where the marginal revenue would be
6 greater than the marginal cost. Has that sort of
7 multiple use ever been considered for pumped storage
8 alternatives within Ontario Hydro?

9 MR. SNELSON: A. Not to my knowledge.
10 The Delphi point scheme, I believe, would also require
11 transmission through very sensitive areas of the
12 province which you are quite familiar with.

13 Q. Yes, I am quite familiar with that.

14 Could the sale of this water to
15 municipalities and/or in an area, to go into an area
16 that I am more interested in, for the potential of
17 irrigation sources adjacent to farm owners, help to
18 lower the cost of the project to an economically
19 acceptable level?

20 A. The short answer is possibly, but you
21 can't be sure of that. The reason for that is that the
22 usefulness of pumped storage depends on whether in fact
23 any further load levelling is required. Since the
24 demand management load shifting program is aimed to
25 provide the bulk of the load levelling that is useful

1 to the system, then pumped storage in addition to that
2 is not really useful, and so lowering the cost a little
3 isn't likely to alter that situation.

4 Now, if the load shifting program doesn't
5 provide the full load levelling that it would be
6 useful, then something that would reduce the cost of
7 pumped storage would help that as an option in filling
8 that gap.

9 Q. What I am looking at is the use of
10 some sort of revenue generating or multiple use to try
11 to put the fixed costs or the total system costs down
12 to the point where maybe not so much reliance is placed
13 on the load shifting or other options. Is there any
14 room for manoeuvring in that or is it fairly well
15 fixed? Is the cost range in the \$50 range regardless
16 of other uses going to stay about the same in relation
17 to other sources?

18 [4:43 p.m.]

19 A. I don't know where the potential
20 revenue from providing municipal water supplies could
21 have sufficient impact to have a significant effect on
22 lowering the cost. And costs you're referring to are
23 standard costs, which are not a measure that we're
24 currently using, and the actual pump storage facility
25 is only a small part of that cost.

1 Q. Is anyone on the panel familiar with
2 the design of or the operation of the Luddington pump
3 storage facility in the state of Michigan?

4 My reason for asking --

5 THE CHAIRMAN: Mr. Snelson was all set to
6 answer that question.

7 MR. THOMPSON: I'm sorry. I thought I
8 saw a whole bunch of no's here. I'm sorry if I missed
9 you here.

10 MR. SNELSON: I was merely going to say
11 that I know roughly where Luddington is located in
12 Michigan, and it's quite a large pump storage facility,
13 but the specifics I don't know.

14 MR. THOMPSON: Q. Would you accept for
15 the purposes of my upcoming question that it is
16 approximately 2100 megawatts in capacity, and that it
17 provides approximately 11 per cent of the state of
18 Michigan's capacity, and that it is located on the east
19 shore of Lake Michigan approximately half way up Lake
20 Michigan or directly west of the Bruce Nuclear power
21 Development?

22 MR. SNELSON: A. Yes. I would have
23 guessed about 2000 megawatts, but...

24 Q. Which leads up to my broad yet
25 hopefully fairly simple question.

1 What's different in Michigan that would
2 allow for the continued operation of a facility
3 representing that much of a percentage of the total
4 capacity, whereas in Ontario our capacity would be
5 proposed to be effectively zero per cent? Is there --
6 what's different about the load or the load shape or
7 curve or just why so much there and so little here I
8 guess is what I'm asking?

9 A. Two factors come to mind. One is
10 that the Michigan system, to my knowledge, is a summer
11 peaking system that experiences very short duration
12 peak loads. Much peakier than our system at around the
13 time of peak load.

14 And secondly, that the Michigan system, I
15 believe, and I'm not quite so sure of this, but I
16 believe has a much smaller proportion of hydraulic
17 generation on the system. And generally speaking
18 systems that are largely thermal generation find more
19 use for pump storage than systems that have a
20 substantial proportion of hydraulic generation.

21 Q. Do you happen to know if the
22 Luddington water is available to either the town of
23 Luddington or neighboring farmers?

24 A. I do not know.

25 Q. Would the location of pump storage

1 sites in Southern Ontario, as mentioned in Exhibit 57,
2 given the now known transmission constraints identified
3 in Panel 5 and elsewhere, could they outweigh the
4 inefficiencies and reduce the dependence on load
5 shifting and other options?

6 I'm thinking of a couple of the specific
7 things, and I'll just say we're not going to refer to
8 them specifically, but just pump storage sites in
9 Southern Ontario in general. This document was
10 prepared prior to identifying the transmission
11 constraints brought on by the independent or the NUGS.
12 Have things changed so that more weighting could be
13 given to pump storage now?

14 A. I don't think they have significantly
15 changed.

16 Q. What weighting if any, is given to
17 assisting system stability by locating closer to load?
18 I'm thinking possibly of our transient stability
19 problems, or just by having these systems close to the
20 load as a means of increasing security of the system.
21 Has any weighting been given to that?

22 A. I believe that generally speaking our
23 system does not suffer from very large transient
24 stability problems by having generation that is remote
25 from those.

1 Now for instance, Quebec, with hydraulic
2 generation providing most of its generation being many
3 hundreds of miles from the main load centres in
4 Montreal, Quebec City corridor does have significant
5 transient stability problems because of remote
6 generation.

7 That's not to say we don't have transient
8 stability problems, and Mr. Macedo, on Panel 7, I'm
9 sure will be able to discuss that issue in a more
10 knowledgeable way than I can.

11 Q. I understand I'm part of the cause of
12 the transient stability problems from previous
13 hearings.

14 Last question: Could the identified
15 transmission constraints and the potential for
16 municipal or farm sale of reservoir water to
17 municipalities cause pump storage to be re-evaluated by
18 Hydro?

19 I'm not looking at it possibly as early
20 as our long awaited reintegration study, but it would
21 just appear to me that there may be the remote
22 possibility that in a couple years time we might say,
23 "Eureka." We're in a long draught, farmers are falling
24 all over themselves to buy water from us, we've
25 re-evaluated now that pump storage has the same cost as

1 demand management, for example. Are we anywhere near
2 to that? Or is that just a hypothetical with very
3 likelihood of ever happening?

4 A. I don't know. As I've said, I don't
5 know that the potential for sale of water, I just don't
6 have a feel at all for whether that could significantly
7 affect the economics of the scheme.

8 MR. THOMPSON: Those are my questions Mr.
9 Chairman.

10 Thank you very much, panel.

11 THE CHAIRMAN: Thank you. Thank you, Mr.
12 Thompson.

13 We start with a new one tomorrow. Who is
14 on tomorrow?

15 MS. MORRISON: Mr. Kelsey.

16 THE CHAIRMAN: Mr. Kelsey for Northwatch?

17 MS. MORRISON: And Mr. Allison from OMAA,
18 if he gets here from Sault Ste. Marie.

19 THE CHAIRMAN: And Mr. Allison from OMAA,
20 if he gets here from Sault Ste. Marie, which is snowed
21 in.

22 And who after that? Is that the day?

23 MS. MORRISON: I have got a couple of
24 other people that are supposed to be ready. I'm
25 checking with them tonight.

1 THE CHAIRMAN: And Ms. Kleer, we will
2 tentatively schedule you for Monday morning? Is that
3 satisfactory?

4 MS. KLEER: That's fine.

5 THE CHAIRMAN: Does that fit in with your
6 plans?

7 MS. MORRISON: Yes.

8 THE CHAIRMAN: We will adjourn until
9 tomorrow morning at 10:00.

10 THE REGISTRAR: This hearing will adjourn
11 until 10:00 tomorrow morning.
12
13

14 ---Whereupon the hearing was adjourned at 4:51 p.m. to
15 be reconvened on Wednesday, December 4, 1991, at
16 10:00 a.m.
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E R R A T A
and
C H A N G E S

To: Volume 86

Date: Monday, December 2nd, 1991.

Interrogatory No. 6.26.265. should have been numbered
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